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(54) Title: OLFACTORY RECEPTOR SEQUENCES

(57) Abstract: The present invention provides polynucleotide sequences which encode polypeptides involved in olfactory sensa-
tion. The present invention also provides the polypeptides encoded by these polynucleotide sequences, vectors comprising these
polynucleotide sequences and host cells transfected with these polynucleotide sequences. The present invention further provides
for functional variants and homologues of these polynucleotide sequences and the polypeptides encoded by these polynucleotides.
Libraries of polypeptides are also provided. Also included in the present invention is the use of these polypeptides and libraries of
polypeptides in screening odorant molecules to determine the correspondence (scent representation, scent fingerprint or scent pro-
file) between individual odorant receptors (the polypeptides) and particular odorant molecules. Also encompassed by the present
invention is the use of the scent representation, scent fingerprint or scent profile to re-create and edit scents.

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OLFACTORY RECEPTOR SEQUENCES

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application claims priority benefit of United States Provisional Patent Application Serial No. 60/158,615, filed on October 8, 1999, and United States Provisional Patent Application Serial No. 60/184,809, filed on February 24, 2000. The contents of those applications are hereby incorporated by reference herein in their entirety.

STATEMENT OF RIGHTS TO INVENTIONS MADE UNDER FEDERALLY SPONSORED RESEARCH

Not applicable.

TECHNICAL FIELD

15 The present invention is in the field of human olfactory receptors and their use in screening for olfactory agonists and antagonists. The present invention pertains to isolated nucleotide sequences which encode human olfactory receptors and also to the proteins
20 encoded by said nucleotide sequences. The present invention also encompasses vectors comprising the nucleotide sequences of the invention and further, host cells transfected with said vectors. The present invention also allows for the determination of primary scents and the identification of the odor receptors which are encoded to detect these primary scents as well as the determination of secondary scents and the identification of
25 combinations of odor receptors which are encoded to detect such secondary scents.

BACKGROUND ART

Our sense of smell plays an important role not only in our appreciation of our surroundings such as the smell of flowers or new mown grass, but also evolved as a survival skill. Numerous odorant molecules can be detected at extremely low concentrations, providing early warning of danger, such as the smell of smoke or contaminated food. Indeed, a potent example of this is that most pregnant women experience a heightened sense of smell, presumably to protect the fetus from the deleterious effects of food poisoning.

It is estimated that humans can detect millions of different molecular species; however, our nose can discriminate only a fraction of these different chemicals (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320), usually estimated at about 10,000 odorants (Axel, *Scientific American* 1995, October, 154-159). Odorants for terrestrial species such as humans, are volatile (air born) ligands which are detected by the olfactory system. Odorants have vastly different chemical structures and subtle differences can lead to pronounced changes in the perceived odor (Mombaerts, *supra*). For instance, when the hydroxyl group of octanol is replaced by a carboxyl group to give octanoic acid, its perceived odor changes from orange and rose-like to rancid and sweaty (Malnic *et al.*, *Cell* 1999 96, 713-723). The basis for these feats of sensory perception are just beginning to be understood at a cellular and molecular level.

The olfactory system contains millions of olfactory sensory neurons (OSNs) located in the olfactory epithelium of the nasal cavity. In humans, the olfactory epithelium occupies an area of approximately 5 cm². The OSNs are bipolar with one end extending through the supporting cell into the mucosal layer, terminating in hairlike cilia. These cilia are the site of the olfactory receptors (OR) where the odorant ligands are thought to bind (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320, Hildebrand *et al.*, *Annu. Rev. Neurosci.*, 1997, 20, 595-631). The OSNs also have a single unbranched axon which leads to the olfactory bulb, a part of the brain containing approximately 2000 glomeruli where the axons terminate and initial processing of the sensory code takes place. OSNs expressing the same OR are randomly interspersed throughout the olfactory epithelium, but in both the nose and the bulb, information derived from different ORs is strictly segregated; each OSN in the nose and each glomerulus in the olfactory bulb appear to be dedicated to input from one or few OR type(s) (Malnic *et al.*, *Cell* 1999 96, 713-723). It also appears that the location of the glomeruli are conserved across individuals of a species, providing the first spatial processing of particular odorant patterns (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). The domains in the olfactory bulb for

different odors may overlap, but the overall patterns are distinct (Hildebrand *et al.*, *supra*), therefore, it should be possible to identify and reproduce the characteristic pattern of a given odorant. Output neurons project from the olfactory bulb to the primary olfactory cortex and from there to the higher cortical areas of the brain and to the limbic system (Malnic *et al.*,
5 *supra*; Hildebrand *et al.*, *supra*, 20, 595-631).

Until the identification of a large family of genes encoding putative odorant receptors (Buck & Axel *Cell* 1991 65, 175-187), progress towards understanding the process of odor recognition was negligible. In recent years there has been an explosion in this field as more and more putative odor receptors are isolated and cloned. The odorant receptor gene products
10 have thus far been characterized through homology as seven transmembrane domain G protein-coupled receptors (GPCR). It is estimated that there are probably 500-750 OR-like sequences in humans, while there are 500-1000 OR genes in rat and mouse (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). In mice, OR-like sequences make up approximately 1% of their genome, the largest known family in the mammalian genome, surpassing the complexity of
15 even the immunoglobulin and T-cell antigen receptor gene families (Mombaerts, *supra*). The OR are concentrated on the surface of the OSN's mucus coated cilia and it is thought that odorant molecules bind to the OR in the olfactory epithelium and thereby initiate signal transduction. Current interpretation of recent experimental evidence favors the idea that each neuron expresses only one, or very few, ORs. Since mammals can detect at least 10,000 odors and
20 there are approximately 1,000 or fewer ORs, each of the ORs must respond to several odorant molecules, and each odorant molecule must bind to several receptors. It is believed that various receptors respond to discrete parts of an odorant molecule's structure and that an odorant consists of several chemical groups each of which bind a characteristic receptor (Axel *Scientific American* 1995, October, 154-159; Malnic *et al.*, *Cell* 1999 96, 713-723).

25 The main signal transduction pathway mediated by OR homologues in vertebrate species involves G protein-mediated stimulation of adenylyl cyclase activity, resulting in cAMP elevation that opens cyclic-nucleotide gated channels with a non-specific cation selectivity (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). However, there are still numerous unanswered questions and recently it has come to light that 38-76% of the human
30 gene OR sequences that are being reported may be pseudogenes and therefore incapable of expressing the proteins that encode the olfactory receptors. Some of the incidences may be due to the method of extracting the genomic DNA libraries (Mombaerts, *supra*). Few pseudogenes have been found in other vertebrates and their incidence in libraries from testicular DNA is also

rare (Hildebrand *et al.*, *Annu. Rev. Neurosci.*, 1997, 20, 595-631). cDNA should not contain pseudogenes. There are a number of examples of ORs which have been successfully expressed and reactions to certain odorant ligands have been determined (Malnic *et al.*, *Cell* 1999 96, 713-723; Mombaerts, *supra*; Zhao *et al.*, *Science* 1998 279, 237-242).

5 Some attempts to express the ORs in heterologous cell lines resulted in the formation of inclusion bodies rather than the insertion of the proteins into the membrane (Kiefer *et al.*, *infra*). However, purification of the receptors after expression in *E. coli* and their insertion into lipid vesicles facilitates the use of these receptors in odorant ligand screening using a combination of photoaffinity labeling and Trp fluorescence (Kiefer *et al.*, *Biochemistry* 1996
10 35, 16077-16084). In addition, a functional human OR receptor protein has been expressed in HEK-293 cells and oocytes and found to interact with odorant ligands (Wetzel *et al.*, *J. Neurosci.* 1999 19, 7426-7433). There have also been, a number of successful efforts of expressing cDNA in insect Sf9 cells using *baculovirus* vectors (Mombaerts *Annu. Rev. Neuosci.* 1999) as well as assays with neuronal tissue (Malnic *et al.*, *Cell* 1999 96, 713-723;
15 Zhao *et al.*, 1998; Firestein *et al.*, WO 98/50081). In addition, recent work accomplished the expression of chimeric mouse olfactory receptor sequences in HEK-293 cells and showed their reactivity towards a panel of odorant ligands, some at micromolar concentrations (Krautwurst *et al.*, *Cell* 1998 95 917-926). The drawback to expression in heterologous cell systems is the lack of working signal transduction pathways which can be used to detect responses to odorant
20 ligands; these drawbacks can be overcome with methods known in the art (e. g. U.S. Pat. No. 5,798, 275). There are also methods of expressing and assaying functional neuronal receptors in neuronal cells, including methods for detecting particular odorant ligand specificity (Malnic *et al.*, *supra*; Zhao, *supra*; Firestein *et al.*, *supra*).

25 Other publications of interest are: *Chemical Senses* 6: 343-349 (1981); *Proc. Natl. Acad. Sci. USA* 79: 670-674 (1982); *Proc. Natl. Acad. Sci. USA* 81(6): 1859-1863 (1984); *Nature* 316: 255-258 (1985); *Brain Research* 368: 329-338 (1986); *J. Biol. Chem.* 261: 1299-1305 (1986); *Proc. Natl. Acad. Sci. USA* 83(13): 4947-4951 (1986); *J. Neurosci.* 6: 2146-2154 (1986); *J. Neurochem.* 47: 1527-1533 (1986); *Chemical Senses* 13: 191-204
30 (1988); *Biochem. J.* 260:121-126 (1989); *J. Biol. Chem.* 264: 6780-6785 (1989); *Biochim. Biophys. Acta* 1013: 68-72 (1989); *J. Biol. Chem.* 264: 18803-18807 (1989); *Biochemistry* 29: 7433-7440 (1990); *FEBS Lett.* 270: 24-29 (1990); *Chemical Senses* 15: 529-536 (1990); *Eur. J. Biochem.* 196: 51-58 (1991); *Nature* 349: 790-793 (1991); *Neurosci. Lett.* 141: 115-

118 (1992); Developmental Brain Res. 73: 7-16 (1993); Proc. Natl. Acad. Sci., USA 90: 3715-3719 (1993); Human Mol. Genetics 3: 229-235 (1994); Eur. J. Biochem. 225: 1157-1168 (1994); European Journal of Biochemistry 238: 28-37 (1996); Receptors and Channels 4: 141-147 (1996); Genomics 37(2): 147-160 (1996); Protein Science 8: 969-977 (1999); Genomics 53: 56-68 (1998); Genomics 61:24-36 (1999); Genomics 63: 227-245 (2000); Trends in Neurosci. 7:35-36 (1984); Ann. Rev. Neurosci. 9:329-355 (1986); Trends Biochem. Sci. 12:63-66 (1987); Nature 351: 275-276 (1991); Nature 353: 799-800 (1991); Current Biol. 3(10): 668-674 (1993); Nature 372:321-322 (1994); Essays in Biochemistry. 33: 93-104 (1998); and Nature, 398 (6725): 285-287 (1999).

10 However, despite the forgoing, there has been relatively little work with human olfactory receptors, in particular in determining the sequences of large numbers of receptors, and less progress in determining the correspondence between particular human olfactory receptors and the scent(s) to which they respond.

15 All publications cited herein are hereby incorporated by reference in their entirety.

DISCLOSURE OF THE INVENTION

20 An object of the invention is to determine the correspondence between ORs and the scent(s) to which they respond. Once this is accomplished, scents can be both analyzed and re-created for enhancing human experiences or eliciting particular responses. The present invention pertains to isolated polynucleotide sequences encoding polypeptides involved in olfactory sensation. The present invention also pertains to the proteins encoded by said nucleotide sequences. The present invention also encompasses vectors comprising the
25 nucleotide sequences of the invention and further, host cells transfected with said vectors. The present invention also allows for the determination of primary scents and the identification of the odor receptors which are encoded to detect these primary scents as well as the determination of receptor complex scent components and the identification of combinations of odor receptors which are encoded to detect such receptor complex scent
30 components scents.

The invention provides isolated polynucleotide sequences encoding polypeptides involved in olfactory sensation that are isolated from human olfactory epithelial tissue. The invention further provides expression vectors containing such nucleotide sequences. Also provided by the invention are purified polypeptides encoded by the nucleotide sequences. The invention further provides transformed cells which comprise a suitable host cell transfected with a suitable expression vector containing the nucleotide sequence encoding the receptor. The present invention also encompasses nucleotide sequences isolated from human olfactory epithelial tissue which encode receptors capable of binding odorant molecules. The invention further provides expression vectors containing such nucleotide sequences and homologues of both the polynucleotides and polypeptides. Further, the invention provides a means of using the nucleotide sequences of the invention in a method of screening odorant ligands to determine the specific binding of odorant molecules to a particular receptors, and further, determining the component odorant molecules of subjectively experienced smells, determining the combination odorant molecules and receptor stimulation or inhibition to re-create a particular scent. The binding of odorant molecules by the receptors encompassed in the present invention includes binding resulting in both the agonism (excitation/activation) and antagonism (inhibition/blocking) of receptor function(s) upon binding of the molecule.

Accordingly, the invention includes an isolated polynucleotide comprising a sequence encoding a polypeptide which is involved in olfactory sensation. The OR polypeptides encoded are found within the sequences depicted in polynucleotide sequences SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a nucleotide sequence at least 95% homologous to said sequences. The invention also encompasses the translation products of those sequences. The invention further comprises expression vectors comprising said sequences, host cells containing such expression vectors and/or expressing the polypeptide encoded therein, or phage displaying the polypeptide encoded by the sequences. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention. The invention further encompasses fragments of said polynucleotides which can be used as probes or primers to identify additional polynucleotide sequences through techniques known in the art, including those fragments depicted in SEQ ID NOs: 74-105.

The invention also includes additional isolated polynucleotide comprising a sequence encoding a polypeptide which is involved in olfactory sensation. The OR polypeptides

encoded are found within the sequences depicted in polynucleotide sequences SEQ ID NO:153 through SEQ ID NO: 1084, or a nucleotide sequence at least 95% homologous to said sequences. The invention also comprises the translation products of those sequences. The invention further comprises expression vectors comprising said sequences, host cells containing
5 such expression vectors and/or expressing the polypeptide encoded therein, or phage displaying the polypeptide encoded by the sequences. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention.

10 The invention also encompasses an isolated and purified olfactory receptor polypeptide comprising the sequence of SEQ ID NO: 1085 through SEQ ID NO: 2008, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of SEQ ID NO: 1085 through SEQ ID NO: 2008 and having olfactory receptor function. Host cells expressing such polypeptides and phages displaying such
15 polypeptides are also encompassed by the invention. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention.

Scents can be captured, analyzed and recorded by a sensory device using various
20 methods. Scent capture can be initiated by the user or by an automatic sensing system. A scent can be analyzed in terms of its interaction with olfactory neurons of a mammalian, preferably human, olfactory system, or by the expression of individual receptors under appropriate conditions and appropriate assay conditions in multiwell plates or in terms of its perception by a panel of mammalian, preferably human, subjects. The interaction with olfactory neurons can
25 be determined experimentally, in vitro, by determining the interaction of an odorant with olfactory receptors of a given type. Alternatively, the interaction with olfactory receptor can be determined using a computer simulation which provides information regarding the interaction of an odorant with the olfactory receptors. A panel of subjects can be used to represent odors in terms of their perception. The data so generated can be used to represent a scent in a manner
30 which can be recorded in digital or other format, stored in media such as computer memory, disks, or printed format, and transmitted over a data network. The representation of the scent can be used to re-create the scent at a local or remote site using an emitter module. The

representation of the scent allows for scent editing, where desirable aspects of an odor are enhanced or added and undesirable aspects are attenuated or eliminated.

Accordingly, the invention also embraces libraries of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising the
5 expression products of at least two polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084, where the polynucleotides encode functional olfactory receptors; or functional fragments of the expression products. Libraries of at least 50, 100, 200, or 500 receptors are also encompassed by the invention.

10 Also encompassed by the invention are libraries of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising at least two polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008, where the polypeptides are functional olfactory receptors; or functional fragments of the polypeptides. Libraries of at least 50, 100, 200, or 500 receptors are also encompassed by the invention.

15 The invention also embraces methods for determining the binding pattern of a composition with olfactory receptors, involving exposing the composition to an olfactory receptor library, and determining whether the composition binds to each olfactory receptor, thereby determining the overall binding pattern of the composition. In additional embodiments, the method also involves determining the approximate binding constant with
20 which the composition, or the various chemicals within the composition, bind to the receptors; determining whether a receptor or functional fragment thereof is activated; and determining the absolute amount of activation, or amount of activation relative to another receptor or a control substance. The composition can consist essentially of one compound or chemical, or can comprise at least two compounds or chemicals.

25 The invention also embraces DNA arrays or DNA chips comprising the DNA segments derived from any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084. The invention also embraces a method of determining differences among one or more individuals with respect to their olfactory faculties, comprising the steps of comparing the olfactory DNA of each individual against the array or chip.

30 The invention also embraces a method to determine single nucleotide polymorphisms in olfactory receptors, comprising the steps of uniquely amplifying olfactory receptor sequences from DNA obtained from one or more individuals, based on

primers designed according to the first 25 bases and the last 25 bases of any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084, and determining the similarities and differences between said amplified DNA and the corresponding receptor from SEQ ID NO: 153 through SEQ ID NO: 1084.

5

Brief Description of the Drawings

Figure 1 depicts the isolated polynucleotide sequences, which encode polypeptides involved in olfactory sensation, corresponding to SEQ ID NOs: 1 - 73.

Figure 2 depicts the isolated polynucleotide sequences, which encode polypeptides involved in olfactory sensation, corresponding to SEQ ID NOs: 111 - 152.

Detailed Description of the Invention

15

The present invention provides isolated polynucleotides comprising sequences that encode polypeptides which are involved in olfactory sensation and which can be used to screen odorant ligands, *e.g.*, odorant receptor agonists and antagonists.

Definitions

The term "olfactory receptor" (OR) refers to a polypeptide involved in olfactory sensation. An "olfactory receptor polynucleotide" or "OR polynucleotide" is a polynucleotide encoding a polypeptide involved in olfactory sensation.

The term "odorant ligand" as employed herein refers to a molecule that has the potential to bind to an olfactory receptor. Equivalent terms employed herein include "odorant", "odorant molecule" and "odorant compound". The term "binding" or "interaction" as used herein with respect to odorant ligands refers to the interaction of ligands with the receptor polypeptide where the ligands may serve as either agonists and/or antagonists of a given receptor or receptor function. An odorant ligand may thus directly cause a perception of odor (an agonist), or may block the perception of odor (an antagonist). An odorant ligand may include, but is not limited to, molecules which interact with polypeptides involved in olfactory

sensation. Odorant ligands and molecules which interact with olfactory receptors are generally small, approximately 1000 Daltons, more preferably approximately 750 Daltons, more preferably approximately 500 Daltons, or even more preferably approximately 300 Daltons, hydrophobic molecules with a variety of functional groups. Small changes in structure can induce profound changes in odorant ligand binding and hence in the odor perceived by an individual.

A more detailed description of these sequences, as well as how these sequences were obtained, is provided below.

10

As used herein, a "polynucleotide" is a polymeric form of nucleotides of any length, which contain deoxyribonucleotides, ribonucleotides, and/or their analogs. The terms "polynucleotide", "nucleotide" and "nucleic acid" as used herein are used interchangeably. Polynucleotides may have any three-dimensional structure, and may perform any function, known or unknown. The term "polynucleotide" includes double-, single-stranded, and triple-helical molecules. Unless otherwise specified or required, any embodiment of the invention described herein that is a polynucleotide encompasses both the double-stranded form and each of two complementary single-stranded forms known or predicted to make up the double stranded form. Not all linkages in a polynucleotide need be identical.

20

The following are non-limiting examples of polynucleotides: a gene or gene fragment, exons, introns, mRNA, tRNA, rRNA, ribozymes, cDNA, recombinant polynucleotides, branched polynucleotides, plasmids, vectors, isolated DNA of any sequence, isolated RNA of any sequence, nucleic acid probes, primers, and adaptors. A polynucleotide may comprise modified nucleotides, such as methylated nucleotides and nucleotide analogs. The use of uracil as a substitute for thymine in a deoxyribonucleic acid is also considered an analogous form of pyrimidine.

25

In the context of polynucleotides, a "linear sequence" or a "sequence" is an order of nucleotides in a polynucleotide in a 5' to 3' direction in which residues that neighbor each other in the sequence are contiguous in the primary structure of the polynucleotide. A "partial sequence" is a linear sequence of part of a polynucleotide which is known to comprise additional residues in one or both directions.

30

If present, modification to the nucleotide structure may be imparted before or after assembly of the polymer. The sequence of nucleotides may be interrupted by non-nucleotide components. A polynucleotide may be further modified after polymerization, such as by

conjugation with a labeling component. Other types of modifications included in this definition are, for example, "caps", substitution of one or more of the naturally occurring nucleotides with an analog, internucleotide modifications such as, for example, those with uncharged linkages (e.g., methyl phosphonates, phosphotriesters, phosphoamidates, cabamates, etc.) and with
5 charged linkages (e.g., phosphorothioates, phosphorodithioates, etc.), those containing pendant moieties, such as, for example, proteins (e.g., nucleases, toxins, antibodies, signal peptides, poly-L-lysine, etc.), those with intercalators (e.g., acridine, psoralen, etc.), those containing chelators (e.g., metals, radioactive metals, boron, oxidative metals, etc.), those containing alkylators, those with modified linkages (e.g., α -anomeric nucleic acids, peptide nucleic acids,
10 etc.), as well as unmodified forms of the polynucleotide(s).

Further, any of the hydroxyl groups ordinarily present in the sugars may be replaced by phosphonate groups, phosphate groups, protected by standard protecting groups, or activated to prepare additional linkages to additional nucleotides, or may be conjugated to solid supports. The 5' and 3' terminal OH groups can be phosphorylated or substituted with amines or organic
15 capping group moieties of from 1 to 20 carbon atoms. Other hydroxyls may also be derivatized to standard protecting groups.

Polynucleotides can also contain analogous forms of ribose or deoxyribose sugars that are generally known in the art, including, but not limited to, 2'-O-methyl-, 2'-O-allyl, 2'-fluoro- or 2'-azido-ribose, carboxycyclic sugar analogs, α -anomeric sugars, epimeric sugars such
20 as arabinose, xyloses or lyxoses, pyranose sugars, furanose sugars, sedoheptuloses, acyclic analogs and abasic nucleoside analogs such as methyl riboside.

Although conventional sugars and bases will be used in applying the method of the invention, substitution of analogous forms of sugars, purines and pyrimidines can be advantageous in designing a final product, as can alternative backbone structures like a
25 polyamide backbone such as those used in peptide nucleic acids (PNAs).

A polynucleotide or polynucleotide region has a certain percentage (for example, 75%, 80%, 85%, 90%, 95% or 99%) of "sequence identity" to another sequence means that, when aligned, that percentage of bases are the same in comparing the two sequences.

Homology, as described herein, means that the polypeptide sequences that are encoded
30 by the nucleic acids demonstrate a certain relatedness (i.e., there exists regions of conserved amino acids), but not the same amino acid identity. There is complete or 100% homology at a particular amino acid residue when the amino acids of sequences being compared are the same (there is identity) or represent a conservative amino acid substitution (there is homology). A

“conservative amino acid substitution” occurs when a particular amino acid is substituted by an alternate amino acid of similar charge density, hydrophobicity/hydrophilicity, size and/or configuration (e.g., Val for Ile). A “nonconservative amino acid substitution” occurs when a particular amino acid is substituted by an alternative amino acid of differing properties, that is, charge density, hydrophobicity/hydrophilicity, size and/or configuration (e.g., Val for Tyr). The nucleic acid sequences within the scope of the present invention include those nucleic acids which differ in exact sequence from those listed in SEQ ID NO:1 through SEQ ID NO:73 and SEQ ID NO:111 through SEQ ID NO:152 but which encode identical or homologous polypeptide amino acid sequences.

10 A “primer” is a short polynucleotide, generally with a free 3' -OH group, that binds to a target potentially present in a sample of interest by hybridizing with the target, and thereafter promoting polymerization of a polynucleotide complementary to the target.

15 An “adaptor” is a short, partially-duplexed polynucleotide that has a blunt, double-stranded end and a protruding, single-stranded end. It can be ligated, through its double-stranded end, to the double-stranded end of another polynucleotide. This provides known sequences at the ends of thus modified polynucleotides. Often adaptors contain specific sequences for primer binding and/or restriction endonuclease digestion.

20 A “probe” when used in the context of polynucleotide manipulation refers to a polynucleotide which is provided as a reagent to detect a target potentially present in a sample of interest by hybridizing with the target. Usually, a probe will comprise a label or a means by which a label can be attached, either before or subsequent to the hybridization reaction. Suitable labels include, but are not limited to radioisotopes, fluorochromes, chemiluminescent compounds, dyes, and enzymes.

25 “Transformation” or “transfection” refers to the insertion of an exogenous polynucleotide into a host cell, irrespective of the method used for the insertion, for example, lipofection, transduction, infection or electroporation. The exogenous polynucleotide may be maintained as a non-integrated vector, for example, a plasmid, or alternatively, may be integrated into the host cell genome.

30 A polynucleotide is said to “encode” a polypeptide if, in its native state or when manipulated by methods well known to those skilled in the art, it can be transcribed and/or translated to produce the polypeptide, a homologous polypeptide or a fragment thereof. For purposes of this invention, and to avoid cumbersome referrals to complementary strands, the anti-sense (or complementary) strand of such a polynucleotide is also said to encode the

sequence; that is, a polynucleotide sequence that "encodes" a polypeptide includes both the conventional coding strand and the complementary sequence (or strand).

The terms "polypeptide", "oligopeptide", "peptide" and "protein" are used interchangeably herein to refer to polymers of amino acids of any length. The polymer may be linear or branched, it may comprise modified amino acids, it may be interrupted by non-amino acids, and it may be assembled into a complex of more than one polypeptide chain. The terms also encompass an amino acid polymer that has been modified naturally or by intervention; for example, disulfide bond formation, glycosylation, lipidation, acetylation, phosphorylation, or any other manipulation or modification, such as conjugation with a labeling component. Also included within the definition are, for example, polypeptides containing one or more analogs of an amino acid (including, for example, unnatural amino acids, etc.), as well as other modifications known in the art.

In the context of polypeptides, a "linear sequence" or a "sequence" is an order of amino acids in a polypeptide in an N-terminal to C-terminal direction in which residues that neighbor each other in the sequence are contiguous in the primary structure of the polypeptide. A "partial sequence" is a linear sequence of part of a polypeptide which is known to comprise additional residues in one or both directions.

"Recombinant," as applied to a polynucleotide or gene, means that the polynucleotide is the product of various combinations of cloning, restriction and/or ligation steps, and other procedures that result in a construct that is distinct from a polynucleotide found in nature.

A "vector" is a self-replicating nucleic acid molecule that can be used to transfer an inserted nucleic acid molecule into and/or between host cells. The term includes vectors that function primarily for insertion of a nucleic acid molecule into a cell, vectors that function primarily for the amplification of nucleic acid, and expression vectors that function for transcription and/or translation of the DNA or RNA. Also included are vectors that provide more than one of the above functions.

"Expression vectors" are defined as polynucleotides which, when introduced into an appropriate host cell, can be transcribed into a mRNA capable of being translated into a polypeptide(s). An expression vector also comprises control elements operatively linked to the coding region to enable and/or facilitate expression of the polypeptide in the target cell. These can include transcriptional, translational, posttranscriptional, and posttranslational control elements, as are known in the art. An "expression system" usually connotes a suitable host cell comprised of an expression vector that can function to yield a desired expression product.

A "host cell" includes an individual cell or cell culture which can be or has been a recipient for vector(s) or for incorporation of nucleic acid molecules and/or proteins. Host cells include progeny of a single host cell, and the progeny may not necessarily be completely identical (in morphology or in genomic or total DNA complement) to the original parent cell
5 due to natural, accidental, or deliberate mutation. A host cell includes cells transfected in vivo with a polynucleotide(s) of this invention.

A "cell line" or "cell culture" denotes eukaryotic cells, derived from higher, multicellular organisms, grown or maintained in vitro. It is understood that the descendants of a cell may not be completely identical (either morphologically, genotypically, or phenotypically) to the parent cell.
10 Cells described as "uncultured" are obtained directly from a living organism, and are generally maintained for a limited amount of time away from the organism (i.e., not long enough or under conditions for the cells to undergo substantial replication).

As used herein, "expression" includes transcription and/or translation.

"Heterologous" means derived from (i.e., obtained from) a genotypically distinct entity
15 from the rest of the entity to which it is being compared. For example, a polynucleotide may be placed by genetic engineering techniques into a plasmid or vector derived from a different source, thus becoming a heterologous polynucleotide. A promoter which is linked to a coding sequence with which it is not naturally linked is a heterologous promoter.

An "isolated" or "purified" polynucleotide, polypeptide or cell is one that is
20 substantially free of the materials with which it is associated in nature. By substantially free is meant at least 50%, preferably at least 70%, more preferably at least 80%, even more preferably at least 90%, even more preferably at least 99%, and even more preferably at least 99.9% free of the materials with which it is associated in nature. As used herein, an "isolated" polynucleotide or polypeptide also refers to recombinant polynucleotides or polypeptides,
25 which, by virtue of origin or manipulation: (1) are not associated with all or a portion of a polynucleotide or polypeptide with which they are associated in nature, (2) are linked to a polynucleotide or polypeptide other than that to which they are linked in nature, or (3) do not occur in nature, or (4) in the case of polypeptides, arise from expression of recombinant polynucleotides. Thus, for example, an isolated substance may be prepared by using a
30 purification technique to enrich it from a source mixture. Enrichment can be measured on an absolute basis, such as weight per volume of solution, by specific activity or it can be measured in relation to a second, potentially interfering substance present in the source mixture. Increasing enrichments of the embodiments of this invention are increasingly more preferred.

Thus, for example, a 2-fold enrichment is preferred, 10-fold enrichment is more preferred, 100-fold enrichment is more preferred, 1000-fold enrichment is even more preferred. A substance can also be provided in an isolated state by processes such as chemical synthesis or recombinant expression.

5 A "reagent" polynucleotide, polypeptide, or antibody, is a substance provided for a reaction, the substance having some known and desirable function in the reaction. A reaction mixture may also contain a "target", such as a polynucleotide, antibody, polypeptide, or assembly of polypeptides that the reagent is capable of reacting with. For example, in some types of diagnostic tests, the presence and/or amount of the target in a sample is determined by
10 adding a reagent, allowing the reagent and target to react, and measuring the amount of reaction product (if any).

 "Hybridization" refers to a reaction in which one or more polynucleotides react to form a complex that is stabilized via hydrogen bonding between the bases of the nucleotide residues. The hydrogen bonding may occur by Watson-Crick base pairing, Hoogsteen binding, or in any
15 other sequence-specific manner. The complex may comprise two strands forming a duplex structure, three or more strands forming a multi-stranded complex, a single self-hybridizing strand, or any combination of these. A hybridization reaction may constitute a step in a more extensive process, such as the initiation of an amplification reaction such as PCR, or the enzymatic cleavage of a polynucleotide by a ribozyme.

20 When hybridization occurs in an antiparallel configuration between two single-stranded polynucleotides, those polynucleotides are described as "complementary". A double-stranded polynucleotide can be "complementary" to another polynucleotide if hybridization can occur between one of the strands of the first polynucleotide and the second. The degree to which one polynucleotide is complementary with another is quantifiable in terms of the proportion of bases in
25 opposing strands that are expected to form hydrogen bonds with each other, according to generally accepted base-pairing rules of A-T, A-U and G-C.

 A "stable duplex" of polynucleotides, or a "stable complex" formed between any two or more components in a biochemical reaction, refers to a duplex or complex that is sufficiently long-lasting to persist between formation of the duplex or complex and subsequent detection,
30 including any optional washing steps or other manipulation that may take place in the interim.

 A substance is said to be "selective" or "specific" if it reacts or associates more frequently, more rapidly, with greater duration and/or with greater affinity with a particular cell or substance than it does with alternative cells or substances. An odorant ligand "specifically

binds" to a target if it binds with greater affinity, avidity, more readily, and/or with greater duration than it binds to other substances.

As used herein, "naturally occurring," "native," or "wild type" refers to endogenous polynucleotides and the protein(s) expressed thereby. These terms include full-length and
5 processed polynucleotides and polypeptides. Processing can occur in one or more steps, and these terms encompass all stages of processing. For instance, polypeptides having or lacking a signal sequence are encompassed by the invention. "Non-naturally occurring", "non-native", or "non-wild type" refer to all other polynucleotides and polypeptides.

A "polymerase chain reaction" ("PCR") is a reaction in which replicate copies are made
10 of a target polynucleotide using one or more primers, and a catalyst of polymerization, such as a reverse transcriptase or a DNA polymerase, and particularly a thermally stable polymerase enzyme. Methods for PCR are taught in U.S. Patent Nos. 4,683,195 (Mullis) and 4,683,202 (Mullis et al.). All processes of producing replicate copies of the same polynucleotide, such as PCR or gene cloning, are collectively referred to herein as "amplification."

According to this invention, a "genomic DNA library" is a clone library which contains
15 representative nucleotide sequences from the DNA of a given genome. It is constructed using various techniques that are well known in the art, for instance, by enzymatically or mechanically fragmenting the DNA from an organism, organ, or tissue of interest, linking the fragments to a suitable vector, and introducing the vector into appropriate cells so as to
20 establish the genomic library. A genomic library contains both transcribed DNA fragments as well as nontranscribed DNA fragments.

In comparison, a "cDNA library" is a clone library that differs from a genomic library in that it contains only transcribed DNA sequences and no nontranscribed DNA sequences. It is established using techniques that are well known in the art, i.e., selection of mRNA (e.g. by
25 polyA) making single stranded DNA from a population of cytoplasmic mRNA molecules using the enzyme RNA-dependent DNA polymerase (i.e., reverse transcriptase), converting the single-stranded DNA into double-stranded DNA, cloning the resultant molecules into a vector, and introducing the vector into appropriate cells so as to establish the cDNA library. Alternately, a cDNA library need not be cloned into a vector and/or established in cells, but can
30 be screened using PCR with gene-specific primers, as is well known in the art.

An "individual" is a vertebrate, preferably a mammal, more preferably a human.

General Techniques

The practice of the present invention will employ, unless otherwise indicated, conventional techniques of molecular biology (including recombinant techniques), microbiology, cell biology and biochemistry, which are within the skill of the art. Such techniques are explained fully in the literature, such as: "Molecular Cloning: A Laboratory Manual", second edition (Sambrook et al., 1989); "Oligonucleotide Synthesis" (M.J. Gait, ed., 1984); "Animal Cell Culture" (R.I. Freshney, ed., 1987); "Methods in Enzymology" (Academic Press, Inc.); "Gene Transfer Vectors for Mammalian Cells" (J.M. Miller & M.P. Calos, eds., 1987); "Current Protocols in Molecular Biology" (F.M. Ausubel et al., eds., 1987 and annual updates); "PCR: The Polymerase Chain Reaction", (Mullis et al., eds., 1994); "Current Protocols in Immunology" (J.E. Coligan et al., eds., 1991).

Basis for identification and description of the polynucleotides and polypeptides

The polynucleotide sequences were identified using oligonucleotide primers which were complementary to OR membrane-spanning regions. A number of different primers were used to elicit a variety of nucleotide sequences which encode polypeptides involved in olfactory sensation. The identification and isolation of nucleotide sequences which encode polypeptides involved in olfactory sensation and the polypeptides that they encode is vital for determining the response of receptors to odorant molecules, the elucidation of scent representations, profiles, or fingerprints, the reproduction of scent representations, profiles, or fingerprints and the editing of scent representations, profiles, or fingerprints.

Polynucleotides encoding polypeptides involved in olfactory sensation

The present invention provides isolated polynucleotides encoding polypeptides which are involved in olfactory sensation, vectors containing these polynucleotides, host cells containing these polynucleotides, and compositions comprising these polynucleotides. These polynucleotides are isolated and/or produced by chemical and/or recombinant methods, or a combination of these methods. The present invention includes polynucleotides isolated from the human olfactory epithelium which encode polypeptides which are involved in olfactory sensation, vectors containing these polynucleotides, host cells containing these polynucleotides, and compositions comprising these polynucleotides. Unless specifically stated otherwise,

“polynucleotides” shall include all embodiments of the polynucleotides of this invention. These polynucleotides are useful as probes, primers, in expression systems, and, in a preferred embodiment, in screening methods as described herein. In one embodiment the polynucleotides of the present invention can be isolated by creating a cDNA library using
5 template RNA from human olfactory epithelium tissue. A detailed example is related in Example 1, below.

The advantage of constructing a cDNA library for isolation of the desired nucleotide sequences is that the likelihood of obtaining pseudogenes is greatly reduced compared to using a genomic DNA library for the same purpose. cDNA libraries contain only mRNA expressed
10 in the tissue used for the construction of the library, in this case, the human olfactory epithelium. The preferred olfactory epithelium tissue should express only those nucleotide sequences which are relevant for olfactory function, thereby excluding nonfunctioning pseudogenes and also GPCRs which may be similar in primary structure (amino acid sequence) but are not encoded in OSNs. As the number of GPCRs utilized in human signal transduction
15 pathways is extremely wide and varied, cDNA libraries constructed using olfactory tissue are preferable for isolating nucleotide sequences that encode polypeptides which are involved in olfactory sensation, inasmuch as genomic libraries can contain abundant nucleotide sequences which encode for a variety of GPCRs performing numerous functions, and are likely to contain pseudogenes.

The isolation of polynucleotide sequences which encode polypeptides involved in olfactory sensation is described in Example 1. Accordingly, this invention provides isolated polynucleotides that contain sequences encoding polypeptides or portions thereof which are involved in olfactory sensation, wherein the polypeptide is at least 10 amino acids in length, and wherein the polynucleotide sequences are depicted in SEQ ID NOs:1-73 and SEQ ID
20 NOs:111-152.
25

The invention includes modifications to said polynucleotides described above such as deletions, substitutions, additions, or changes in the nature of any nucleic acid moieties. A “modification” is any difference in nucleotide sequence as compared to a polynucleotide shown herein to encode a polypeptide involved in olfactory sensation, and/or any difference in
30 the nucleic acid moieties of the polynucleotide(s), wherein such a modified polynucleotide encodes a polypeptide involved in olfactory sensation or a variant of said polypeptide that is useful in the practice of the invention. Such changes can be useful to facilitate cloning and modify expression of polynucleotides encoding polypeptides which are involved in olfactory

sensation. Such changes also can be useful for conferring desirable properties to the polynucleotide(s), such as stability. The definition of polynucleotide provided herein gives examples of these modifications. Hence, the invention also includes variants of the nucleic acid sequences disclosed herein, which include nucleic acid substitutions, additions, and/or deletions.

The invention also encompasses polynucleotides encoding polypeptides involved in olfactory sensation, including polynucleotides that are full-length, processed, coding, non-coding (including flanking region) or portions thereof, provided that these polynucleotides contain a region encoding at least a portion of a polypeptide involved in olfactory sensation. (That is, the region encodes a functional fragment of an olfactory receptor or other polypeptide involved in olfactory sensation.) Also embodied are the mRNA, cDNA and genomic DNA sequences and fragments thereof that include a polynucleotide sequence comprising a coding sequence for a portion of a polypeptide involved in olfactory sensation.

Genes encoding human olfactory receptors, and optionally including related genomic sequences such as regulatory sequences, can be obtained using olfactory receptor cDNAs as hybridization probes. Under high stringency hybridization conditions, an OR cDNA will hybridize to its cognate OR gene. Use of lower stringency hybridization conditions allows the isolation of OR genes that are related to, but not identical with, the gene corresponding to a particular OR cDNA.

Conditions for hybridization are well-known to those of skill in the art and can be varied within relatively wide limits. Hybridization stringency refers to the degree to which hybridization conditions disfavor the formation of hybrids containing mismatched nucleotides, thereby promoting the formation of perfectly matched hybrids or hybrids containing fewer mismatches; with higher stringency correlated with a lower tolerance for mismatched hybrids. Factors that affect the stringency of hybridization include, but are not limited to, temperature, pH, ionic strength, and concentration of organic solvents such as formamide and dimethylsulfoxide. As is well known to those of skill in the art, hybridization stringency is increased by higher temperatures and/or lower ionic strengths. See, for example, Ausubel et al., *supra*; Sambrook et al., *supra*; M.A. Innis et al. (eds.) *PCR Protocols*, Academic Press, San Diego, 1990; B.D. Hames et al. (eds.) *Nucleic Acid Hybridisation: A Practical Approach*, IRL Press, Oxford, 1985; and van Ness et al., (1991) *Nucleic Acids Res.* 19:5143-5151. The degree of stringency can be adjusted not only during a hybridization reaction, but also in post-hybridization washes, as is known to those of skill in the art.

The invention also encompasses polynucleotides encoding polypeptides involved in olfactory sensation, functionally equivalent variants and derivatives of full-length polypeptides involved in olfactory sensation and functionally equivalent fragments. For instance, changes in a DNA sequence that do not change the encoded amino acid sequence, as well as those that result in conservative substitutions of amino acid residues, non-deleterious non-conservative substitutions, one or a few amino acid deletions or additions, and substitution of amino acid residues by amino acid analogs, will not significantly affect properties of the encoded polypeptide. Polypeptides homologous to the polypeptides encoded by the polynucleotides described herein can also be identified using algorithms and methods well-known to those of skill in the art, such as those described in Ausubel, "Current Protocols in Molecular Biology," Chapter 19; see also Altschul, S.F., Gish, W., Miller, W., Myers, E.W. & Lipman, D.J. (1990) "Basic local alignment search tool." J. Mol. Biol. 215:403-410; Gish, W. & States, D.J. (1993) "Identification of protein coding regions by database similarity search." Nature Genet. 3:266-272; Madden, T.L., Tatusov, R.L. & Zhang, J. (1996) "Applications of network BLAST server" Meth. Enzymol. 266:131-141; Altschul, S.F., Madden, T.L., Schäffer, A.A., Zhang, J., Zhang, Z., Miller, W. & Lipman, D.J. (1997) "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs." Nucleic Acids Res. 25:3389-3402; and Zhang, J. & Madden, T.L. (1997) "PowerBLAST: A new network BLAST application for interactive or automated sequence analysis and annotation." Genome Res. 7:649-656. A preferred method of determining homology is the BLAST set of similarity search programs (Altschul, S.F., Gish, W., Miller, W., Myers, E.W. & Lipman, D.J. (1990) "Basic local alignment search tool." J. Mol. Biol. 215:403-410. Polypeptides which are 40% homologous, 50% homologous, 60% homologous, 70% homologous, 80% homologous, 90% homologous, 95% homologous, or 99% homologous to the polypeptides encoded by the polynucleotides described herein are encompassed by the invention.

Nucleotide substitutions that do not alter the amino acid residues encoded can be useful for optimizing gene expression in different systems. Suitable substitutions are known to those of skill in the art and are made, for instance, to reflect preferred codon usage in the particular expression systems. In another example, alternatively spliced polynucleotides can give rise to different functionally equivalent fragments or variants of an polypeptide involved in olfactory sensation. Alternatively processed polynucleotide sequence variants are defined as polynucleotide sequences corresponding to mRNAs that differ in sequence from one another but are derived from the same genomic region, for example, mRNAs that result from: 1) the

use of alternative promoters; 2) the use of alternative polyadenylation sites; and/or 3) the use of alternative splice sites.

Preparation of polynucleotides involved in olfactory sensation

5 The polynucleotides of this invention can be obtained using chemical synthesis, recombinant methods, or PCR.

 Methods of chemical polynucleotide synthesis are well known in the art and need not be described in detail herein. One of skill in the art can use the sequences provided herein and a commercial DNA synthesizer to produce a desired DNA sequence.

10 For preparing polynucleotides which encode polypeptides involved in olfactory sensation using recombinant methods, a polynucleotide comprising a desired sequence can be inserted into a suitable vector, and the vector in turn can be introduced into a suitable host cell for replication and amplification. Polynucleotides may be inserted into host cells by any means known in the art. Cells are transformed by introducing an exogenous polynucleotide by direct
15 uptake, endocytosis, transfection, F-mating, particle bombardment, liposome mediation, or electroporation. Once introduced, an exogenous polynucleotide can be maintained within the cell as a non-integrated vector (such as a plasmid) or integrated into the host cell genome. The polynucleotide encoding a polypeptide involved in olfactory sensation can be isolated from the host cell by methods well known within the art. See, e.g., Sambrook et al. (1989).

20 Alternatively, PCR allows amplification of DNA sequences. PCR technology is well known in the art and is described in U.S. Pat. Nos. 4,683,195, 4,800,159, 4,754,065 and 4,683,202, as well as *PCR: The Polymerase Chain Reaction*, Mullis et al. eds., Birkhausw Press, Boston (1994).

 RNA can be obtained in a number of ways in an appropriate vector and the vector is
25 transformed into a suitable host cell. When the inserted DNA is transcribed into RNA, the RNA can then be isolated using methods well known to those of skill in the art, as set forth in Sambrook et al., (1989), for example. RNA can also be obtained through in vitro reactions. For example, the polynucleotide, which encodes a polypeptide involved in olfactory sensation, can be inserted into a vector that contains appropriate transcription promoter sequences.

30 Commercially available RNA polymerases will specifically initiate transcription at their promoter sites and continue the transcription process through the adjoining DNA polynucleotides. Placing the polynucleotide sequences which encode polypeptides involved in

olfactory sensation between two such promoters allows the generation of sense or antisense strands of desired RNA.

5 ***Cloning and expression vectors comprising polynucleotide sequences encoding polypeptides involved in olfactory sensation***

The present invention further includes a variety of vectors containing polynucleotides encoding polypeptides involved in olfactory sensation. These vectors can be used for expression of recombinant polypeptides as well as a source of polynucleotides which encode polypeptides involved in olfactory sensation. Cloning vectors can be used to obtain replicate
10 copies of the polynucleotides, which encode polypeptides involved in olfactory sensation, they contain, or as a means of storing the polynucleotides in a depository for future recovery.

Expression vectors (and host cells containing these expression vectors) can be used to obtain polypeptides produced from the polynucleotides they contain. Suitable cloning and expression vectors include any known in the art, e.g., those for use in in vitro, bacterial, mammalian, yeast
15 and insect expression systems. Specific vectors and suitable host cells are known in the art and need not be described in detail herein. For example, see Gacesa and Ramji, *Vectors*, John Wiley & Sons (1994).

Cloning and expression vectors typically contain a selectable marker (for example, a gene encoding a protein necessary for the survival or growth of a host cell transformed with the
20 vector), although such a marker gene can be carried on another polynucleotide sequence co-introduced into the host cell. Only those host cells into which a selectable marker has been introduced will survive and/or grow under selective conditions. Typical selectable markers encode protein(s) that (a) confer resistance to antibiotics or other toxins substances, e.g., ampicillin, neomycin, methotrexate, etc.; (b) complement auxotrophic deficiencies; or (c)
25 supply critical nutrients not available from complex media. The choice of the proper marker gene will depend on the host cell, and appropriate genes for different hosts are known in the art. Cloning and expression vectors also typically contain a replication system recognized by the host.

Suitable cloning vectors may be constructed according to standard techniques, or may
30 be selected from a large number of cloning vectors available in the art. While the cloning vector selected may vary according to the host cell intended to be used, useful cloning vectors will generally have the ability to self-replicate in an appropriate host, may possess a single target for one or more particular restriction endonucleases, and/or may carry genes for a marker

that can be used in selecting clones containing the vector. Suitable examples include plasmids and bacterial viruses, e.g., pUC18, pUC19, m13mp18, m13mp19, pBR322, pMB9, ColE1, pCR1, RP4, phage DNAs, and shuttle vectors such as pSA3 and pAT28. These and many other cloning vectors are available from commercial vendors such as BioRad, Stratagene, and

5 **Invitrogen.**

Expression vectors generally are replicatable polynucleotide constructs that contain a polynucleotide encoding an polypeptide involved in olfactory sensation of interest. The polynucleotide, which encodes a polypeptide involved in olfactory sensation, encoding the polypeptide is operatively linked to suitable transcriptional controlling elements, such as

10 promoters, enhancers and terminators. For expression (i.e., translation), one or more translational controlling elements are also usually required, such as ribosome binding sites, translation initiation sites, and stop codons. These controlling elements (transcriptional and translational) may be derived from the gene encoding polypeptides involved in olfactory sensation, or they may be heterologous (i.e., derived from other genes and/or other organisms).

15 A polynucleotide sequence encoding a signal peptide can also be included to allow a polypeptide involved in olfactory sensation to cross and/or lodge in cell membranes or be secreted from the cell. A number of expression vectors suitable for expression in eukaryotic cells including yeast, insect, avian, plant and mammalian cells are known in the art. Common vectors, such as YEpl3 and the Sikorski series pRS303-306, 313-316, 423-426 can also be

20 used. Vectors pDBV52 and pDBV53 are suitable for expression. Another example of an expression vector/host cell system is the baculovirus (e.g., nuclear polyhedrosis virus)/insect cell (e.g., sf9 cells) system.

Human olfactory receptor polypeptides are expressed from olfactory receptor cDNA by methods well-known to those of skill in the art. A cDNA or portion thereof is inserted in an

25 expression vector using standard molecular cloning techniques. Coupled in vitro transcription and translation of such a vector results in expression of the OR protein encoded by the cDNA. In vivo expression of a OR polypeptide is accomplished by inserting an OR cDNA into a eucaryotic or procaryotic expression vector, of which many are known in the art, to generate an OR expression construct. The OR expression construct is introduced into an appropriate

30 host cell in which the OR sequences are expressed (by transcription and translation) and optionally secreted, and the expressed OR polypeptide is obtained from the cell growth medium and/or from cell lysates.

A number of expression vectors are known in the art. Prokaryotic expression vectors include, but are not limited to, T7 RNA polymerase/T7 promoter-based vectors, bacteriophage λ -based vectors and various types of fusion vectors. Fusion vectors include, but are not limited to, lacZ and trpE fusion vectors, maltose binding protein fusion vectors, glutathione-S-transferase fusion vectors, and thioredoxin fusion vectors. Baculovirus-based vectors are used for expression in insect cell systems. Expression in mammalian cells (such as HEK, COS and CHO cells) utilizes vectors containing a mammalian origin of replication (such as, for example, a SV40 origin), an efficient promoter (optionally including one or more enhancer sequences), mRNA processing signals (e.g., splice sites and polyadenylation sites), one or more selectable markers, and optionally a prokaryotic replicon to allow propagation and manipulation of the construct in prokaryotic cells. Alternatively, expression in mammalian cells is achieved through the use of any of a number of mammalian viral vectors including, but not limited to, retroviruses, lentiviruses, Semliki Forest viruses, vaccinia viruses, adenoviruses and adeno-associated viruses.

Vectors containing the polynucleotides of interest can be introduced into the host cell by any of a number of appropriate means, including electroporation, direct injection, transfection employing calcium chloride, rubidium chloride, calcium phosphate, DEAE-dextran, or other substances; microprojectile bombardment; lipofection; and infection (where the vector is an infectious agent, such as a virus). The choice of means of introducing vectors or polynucleotides encoding polypeptides involved in olfactory sensation will often depend on the host cell, as will be well known to those of skill in the art.

Host cells transformed with polynucleotides encoding polypeptides involved in olfactory sensation

Another embodiment of this invention are host cells transformed with (i.e., comprising) polynucleotides encoding polypeptides involved in olfactory sensation, and/or vectors having polynucleotide(s) sequences encoding polypeptides involved in olfactory sensation, as described above. Both prokaryotic and eukaryotic host cells may be used. Prokaryotic hosts include bacterial cells, for example *E. coli*, *B. subtilis*, and mycobacteria. Among eukaryotic hosts are yeast, insect, avian, plant and mammalian cells. Host systems are known in the art and need not be described in detail herein.

The host cells of this invention can be used, *inter alia*, as repositories of polynucleotides encoding polypeptides involved in olfactory sensation, and/or vehicles for

production of polynucleotides encoding polypeptides involved in olfactory sensation, and/or polypeptides involved in olfactory sensation . They may also be used as vehicles for *in vivo* delivery of polypeptides involved in olfactory sensation .

5 ***Uses for and methods using polynucleotides encoding polypeptides involved in olfactory sensation***

To determine whether a vector containing polynucleotides is capable of expressing in eukaryotic cells, cells such as, for example, COS-7 (primate origin), CHO (rodent origin), HEK-293 (human origin), or HeLa (human origin) cells can be transfected with the vector.

- 10 Expression of a polypeptide(s) encoded by the vector is then determined by, for example, RIA, ELISA, immunofluorescence of fixed cells, or western blotting of cell lysate using an antibody as a probe. Antibodies can be obtained using, as immunogen, peptide sequences synthesized from the protein sequences encoded by the known polynucleotide sequence. Polypeptides can be purified by, for example, phase partitioning, affinity methods, gel filtration and ion
15 exchange, as well as additional methods known by those skilled in the art. Further characterization of the expressed polypeptide can be achieved by purification of the polypeptide using techniques known in the art.

Polypeptides involved in olfactory sensation

- 20 The present invention encompasses polypeptides involved in olfactory sensation. Expression of said polypeptides is localized in the olfactory neurons located in the olfactory epithelium, as described earlier. The polypeptides may comprise any novel sequence encoded by a nucleotide sequence as depicted in SEQ ID NO:1 through SEQ ID NO:73 and SEQ ID NO:111 through SEQ ID NO:152.

- 25 The invention includes modifications to polypeptides involved in olfactory sensation including functionally equivalent fragments of the polypeptides involved in olfactory sensation which do not significantly affect their properties and variants which may have enhanced or decreased activity. Collectively, these modifications may be termed "analogs" of or a fragment of polypeptides involved in olfactory sensation. Modification of polypeptides is routine practice in
30 the art and need not be described in detail herein. Examples of modified polypeptides include polypeptides with conservative substitutions of amino acid residues, one or more deletions or additions of amino acids which do not significantly deleteriously change the functional activity, or use of chemical analogs. Amino acid residues which can be conservatively substituted for

one another include but are not limited to: glycine/alanine; valine/isoleucine/leucine; asparagine/glutamine; aspartic acid/glutamic acid; serine/threonine; lysine/arginine; and phenylalanine/tyrosine. Such conservative substitutions are known in the art, and preferably, the amino acid substitutions would be such that the substituted amino acid would possess

5 similar chemical properties as that of the original amino acid. These polypeptides also include glycosylated and non-glycosylated polypeptides, as well as polypeptides with other post-translational modifications, such as, for example, glycosylation with different sugars, acetylation, and phosphorylation. Amino acid modifications can range from changing or modifying one or more amino acids to complete redesign of a region. Other methods of

10 modification include using coupling techniques known in the art, including, but not limited to, enzymatic means, oxidative substitution and chelation. Modified polypeptides involved in olfactory sensation are made using established procedures in the art.

The invention also encompasses fusion proteins comprising one or more polypeptides involved in olfactory sensation. For purposes of this invention, an fusion protein contains one

15 or more polypeptides involved in olfactory sensation and another amino acid sequence to which it is not attached in the native molecule, for example, a heterologous sequence or a homologous sequence from another region. Useful heterologous sequences include, but are not limited to, sequences that provide for secretion from a host cell, intracellular trafficking, and stability/degradation. Other useful heterologous sequences are ones which facilitate

20 purification. Examples of such sequences are known in the art and include those encoding epitopes such as Myc, HA (derived from influenza virus hemagglutinin), His-6, or FLAG. Other heterologous sequences that facilitate purification are derived from proteins such as glutathione S-transferase (GST), maltose-binding protein (MBP), or the Fc portion of immunoglobulin.

25

Preparation of polypeptides involved in olfactory sensation

The polypeptides of this invention can be made by procedures known in the art. The polypeptides can be produced by recombinant methods (i.e., single or fusion polypeptides) or by chemical synthesis. Polypeptides, especially shorter polypeptides up to about 50 amino

30 acids, are conveniently made by chemical synthesis. Methods of chemical synthesis are known in the art and are commercially available. For example, a polypeptide can be produced by an automated polypeptide synthesizer employing the solid phase method. Polypeptides can also be made by chemical synthesis using techniques known in the art.

Polypeptides can also be made by expression systems, using recombinant methods. The availability of polynucleotides encoding polypeptides permits the construction of expression vectors encoding intact (i.e., native) polypeptide, functional equivalents and functional fragments thereof, modified forms or recombinant forms. A polynucleotide
5 encoding the desired polypeptide, or a fusion protein, can be ligated into an expression vector suitable for any convenient host. Both eukaryotic and prokaryotic host systems can be used. The polypeptide is then isolated from lysed cells or from the culture medium and purified to the extent needed for its intended use. Purification or isolation of the polypeptides expressed in
10 host systems can be accomplished by any method known in the art (e.g. partitioning exclusion, ion exchange chromatograph, gel filtration, etc.). Other controlling transcription or translation segments, such as signal sequences that direct the polypeptide to a specific cell compartment (i.e., for secretion), can also be used. Examples of prokaryotic host cells are known in the art and include, for example, *E. coli* and *B. subtilis*. Examples of eukaryotic host cells are known in the art and include yeast, avian, insect, plant, and animal cells such as COS7, HeLa, CHO,
15 HEK-293 and other mammalian cells.

Alternatively, in vitro expression systems may also be used to produce polypeptides involved in olfactory sensation. A plasmid containing a polynucleotide encoding polypeptides involved in olfactory sensation, under the control of an appropriate promoter, can be transcribed and the resultant RNA translated in vitro through the use of commercially
20 available reagents. Such methods can be used to produce relatively pure samples of the polypeptide and are known in the art.

Preferably, the polypeptides are at least partially purified from other cellular constituents. In one embodiment, the polypeptides are at least 70%, more preferably at least 80%, even more preferably at least 90% or most preferably at least 95% pure. In this context,
25 purity can be calculated as a weight percent of the total protein content of the preparation. More highly purified polypeptides may also be obtained and are encompassed by the present invention. Methods of protein purification are known in the art and are not described in detail herein. For membrane-bound proteins, the lipid content of the preparation, which is required to maintain the structure and function of the protein, is excluded from the purity calculation. That
30 is, if a preparation weighing 10 mg has 5 mg lipid, 4 mg of desired protein, and 1 mg of undesired proteins, the purity is calculated as 80% (desired protein content divided by total protein content). Preparations of biological or synthetic molecules suitable for maintaining structure and function of membrane proteins are described in Etemadi AH (1985) *Adv Lipid*

- Res 1985;21:281-428; Villalobo A (1990) *Biochimica Et Biophysica Acta*, 1017(1):1-48; Montal M (1987) *Journal Of Membrane Biology* 98(2): 101-115; Scotto AW et al. (1987) *Biochemistry* 26(3): 833-839; Jain MK and Zakim D (1987) *Biochimica Et Biophysica Acta* 906(1): 33-68; Czerski L and Sanders CR (2000) *Anal Biochem* 284(2):327-33 (lipid-detergent mixtures or "bicelles"); Hrafnisdottir S and Menon AK (2000) *J Bacteriol* 182(15):4198-206 (proteoliposomes); Puu G et al. (2000) *Biosens Bioelectron* 15(1-2):31-41 (protein-lipid preparations on solid surfaces); Schafmeister CE et al. (1993) *Science* 262(5134):734-8 ("peptitergents").

10 *Uses of polypeptides involved in olfactory sensation*

- The polypeptides of this invention have a variety of uses. They can be used, for example, to screen odorant ligands in order to determine the scent representations, scent profiles or scent fingerprints of particular odorant molecules and further to characterize the effect of functional groups and chemical characteristics on perceived smell. Methods for screening odorant compounds using odorant receptors in neuronal cells are known in the art (Firestein et al., WO 98/50081; Duchamp-Viret *et al.*, *Science* 1999, 284 2171-2174; Sato *et al.*, *J. Neurophys.* 1994 72 2980-2989; Malnic *et al.*, *Cell* 1999 96 713-723; Zhao *et al.*, *Science* 1998 279, 237-242). There are also methods which can be employed to screen odorant compounds which do not require neuronal cells and are known in the art (Kauvar et al., U. S. Pat. No. 5,798,275; Kiefer *et al.*, *Biochemistry* 1996 35 16077-16084; Krautwurst *et al.*, *Cell* 1998 95 917-926),

- Analysis of the scent can be performed in a number of ways. Various embodiments of the scent analysis system are presented. Examples of how these embodiments might operate are also presented, although it should be emphasized that the invention is not limited by any particular theory of olfactory perception or scent analysis.

Olfactory Space

- The sensory subsystem comprises a series of olfactory receptors, which selectively bind with the chemical component(s) making up the scent. The scent can be characterized in terms of which of the approximately 1,000 olfactory receptors the scent component(s) bind to, and the strength of the interaction of the component(s) with those receptors. Each olfactory receptor can be considered an orthogonal basis vector; the entire set of olfactory receptors can be considered a set of basis vectors spanning "olfactory space." This is analogous to vectors

pointing along the x, y, and z directions in three-dimensional space, where any point in space can be represented by a combination of the x, y, and z basis vectors (with each of the x, y, and z vectors multiplied by the appropriate scalar quantity). The intensity of interaction of a scent with an olfactory receptor determines the magnitude of the vector along that particular "axis" in olfactory space. Thus, every scent can be uniquely described by a vector representation in olfactory space.

A representation of a scent in such a manner that the scent can later be re-created is defined as scent profiling. The aforementioned vector representation is one example of a scent profile.

Primary Scents

For the purposes of this invention, a receptor primary scent component is defined as a chemical that interacts with one and only one scent receptor. A receptor complex scent component is defined as a chemical that interacts with more than one scent receptor; the receptor complex scent component can interact with each of the scent receptors to different degrees, to equal degrees, or can interact with some receptors to the same degree and others to different degrees.

Olfactory receptors are proteins which fall in the class of seven transmembrane domain G protein-coupled receptors, and are found in olfactory neurons *in vivo*. Binding of an odorant to an olfactory receptor causes second messenger systems to become activated or inhibited in the cell, leading to increased cellular production of second messenger molecules such as cyclic AMP. These second messenger systems in turn lead to the depolarization of the olfactory neuron, or other changes in the state of the neuron, which provides the signal to the nervous system that the odorant has been detected.

With a complete set of receptor primary scent components, any scent can be re-created with the knowledge to the degree to which it interacts with each olfactory receptor. The instant invention encompasses such complete sets of receptor primary scent components. Other embodiments of the invention encompass sets of receptor primary scent component chemicals which provide the ability to re-create a particularly desired subset of scents, but not necessarily all possible scents. Still more embodiments encompass sets of receptor primary scent component chemicals which provide the ability to approximate particular scents, while not necessarily exactly re-creating the interaction profile of the particular scents.

In some cases, a receptor complex scent will be an acceptable approximation to a receptor primary scent. That is, if a given receptor complex scent interacts with a first scent receptor strongly, but interacts with other scent receptors less strongly, it can be considered an approximation to a receptor primary scent component for the first receptor. Such a receptor complex scent component is described by the term receptor quasi-primary scent component. One embodiment of the invention encompasses sets of receptor quasi-primary scent component chemicals suitable for re-creating all scents. Another embodiment of the invention encompasses sets of receptor quasi-primary scent component chemicals suitable for re-creating a particularly desired subset of scents, but not necessarily all possible scents. Yet another embodiment encompasses sets of receptor quasi-primary scent component chemicals which provide the ability to approximate particular scents, while not necessarily exactly re-creating the interaction profile of the particular scents.

The identification of receptor primary or quasi-primary scent component chemicals provides the most conceptually straightforward method of re-creating scents. However, another embodiment of the invention encompasses the use of receptor complex scent components for re-creating scents. An example of such an embodiment would be re-creation of a scent that activates olfactory receptors designated OR1, OR2, OR3, OR4, OR5 and OR6 (for the sake of illustration, it is assumed that the olfactory receptors are stimulated to an equal extent). If one is in possession of two receptor complex scent component chemicals (RCSC's) where RCSC1 activates OR1 and OR5, and RCSC2 activates OR2, OR3, OR4, and OR6, then one can reproduce the original scent by mixing RCSC1 and RCSC2 to re-create the original olfactory receptor activation profile. In practice, the profiles of various receptor complex scent components will be much more complicated than the forgoing example, and components which inhibit olfactory activation as well as stimulate activation can be included in the sets. However, once receptor activation profiles of sufficient receptor complex scent components are known, computer algorithms can be utilized to create the appropriate combination of receptor complex scent components. Using vector representations of the olfactory receptor activation profiles for a set of receptor complex scent components, one can create linear combinations of such receptor complex scent components in order to represent a particular scent. For the example given above, such a vector representation would look like (1, 0, 0, 0, 1, 0) for the first receptor complex scent component and (0, 1, 1, 1, 0, 1) for the second receptor

complex scent component, while the vector representation of the scent to be re-created is (1, 1, 1, 1, 1, 1). If x_1 and x_2 are the relative proportions of the first receptor complex scent component and the second receptor complex scent component, respectively, to be combined to re-create the scent, then the problem can be represented as a series of linear

5 equations:

$$1x_1 + 0x_2 = 1$$

$$0x_1 + 1x_2 = 1$$

$$0x_1 + 1x_2 = 1$$

$$0x_1 + 1x_2 = 1$$

$$1x_1 + 0x_2 = 1$$

$$0x_1 + 1x_2 = 1$$

and the solutions for x_1 and x_2 are $x_1 = 1$, $x_2 = 1$. Solutions to systems of linear equations have been thoroughly studied and many algorithms are available for implementation on computers, including algorithms which evaluate the accuracy of an approximate solution when an exact solution cannot be determined. (See, e.g., Dettman, J.W., *Introduction to Linear Algebra and Differential Equations*, Dover Pubs., 1986; Press W.H. et al., *Numerical Recipes in C: The Art of Scientific Computing*, 2nd ed., Cambridge University Press, 1993; Vetterling (ed.) *Numerical Recipes in C: The Art of Scientific Computing/Disk V 2.02*, Cambridge University Press, 1997.) These methods can also be used to determine whether a set of receptor complex scent components is suitable for re-creating a given scent. For example, if the scent to be recreated is represented by the vector (1, 1, 1, 1, 1, 2), there will be no solution to the resulting system of linear equations using the two receptor complex scent components in the illustration above. In this instance, one or more additional receptor scent components will need to be identified in order to be able to re-create the scent in terms of the receptor primary scent components. Alternatively, the scent represented by (1, 1, 1, 1, 1, 1) may be an acceptable approximation to the scent represented by (1, 1, 1, 1, 1, 2). Integers are used in this example for clarity, but the vectors can contain any real number representing a measured intensity; for example, (1.1, 0.997, 1.08, 1.2, 0.88888..., 2.00001) may be an acceptable approximation to the scent represented by (1, 1, 1, 1, 1, 2).

It will be readily appreciated that the choice of a complete set of receptor primary, quasi-primary, or complex scent component chemicals (capable of generating all scents) versus a partial set of receptor primary, quasi-primary, or complex scent component chemicals (capable of generating, exactly or approximately, a subset of scents) depends on the application for which scent re-creation is desired.

A special category of receptor scent components are chemicals which bind to a receptor without activating it. If these non-activating chemicals prevent chemicals which do activate the receptors from binding, the non-activating chemicals act to "turn off" those receptors. These non-activating chemicals, or receptor binding antagonists, are particularly useful in editing scents, as they can be added to a scent to attenuate or eliminate particular aspects of the scent. In the vector example above, if a particular receptor antagonist blocks OR2, OR3, and OR4, but not OR1, OR5 or OR6, then it can be represented in vector format as (0, -1, -1, -1, 0, 0). In the reproduction of (1, 1, 1, 1, 1, 2) from the vectors (1, 0, 0, 0, 1, 0) and (0, 1, 1, 1, 0, 1), the following combination can be used:

$1 \times (1, 0, 0, 0, 1, 0) + 2 \times (0, 1, 1, 1, 0, 1) + 1 \times (0, -1, -1, -1, 0, 0)$ to yield the vector (1, 1, 1, 1, 1, 2). In some instances, enough of a particular receptor binding antagonist is used to eliminate any possibility of activation by a receptor scent component, in which case the vector entry for the receptor(s) which are blocked by that antagonist contains 0 in the vector position corresponding to that receptor(s).

Perceptive primary scents are defined as scents that give a single scent perception, for example, the scent "lemon" as perceived by a human. A perceptive primary scent can be composed of one or more receptor primary scent components, one or more receptor complex scent components, or a mixture of one or more receptor primary scent components and one or more receptor complex scent components. Since perceptive primary scents are to some extent subjective, identification of perceptive primary scents can be performed by using a panel of subjects who evaluate and describe scents. A perceptive complex scent is made up of more than one perceptive primary scent. The boundaries between a perceptive primary scent and a perceptive complex scent are also to some extent subjective; for example, one person may describe a scent as "pizza," while another person may describe the same scent as "sausage, cheese and tomato sauce." That is, one person may perceive a scent as a perceptive primary scent for "pizza," while another person may perceive the same scent as a perceptive complex scent made up of several individual perceptive primary scents. In order to standardize perceptive scents, a panel of five or more, preferably ten or more, more preferably fifty or

more, still more preferably one hundred or more, people can be surveyed to label various perceptive scents. When a plurality, preferably a majority, more preferably 66 2/3 % or greater, still more preferably 95 % or greater, even more preferably 99% or greater, of the panel identifies a scent as the same scent (e.g., of a panel of 100 people, 95 describe a scent as "pizza," while the other 5 describe the scent otherwise); the scent can be labeled as a perceptive scent (the perceptive scent can be primary or complex, depending on whether the panel identifies it as a single scent or a mixture of scents).

In fields where existing classification schemes already exist, the perceptive primary and complex scents can be indexed according to those schemes. For example, the SFP (Société Française des Parfumeurs) has drawn up a classification system based on 5 main groups, subdivided into classes. Such a classification can be used for selecting perceptive primary scents and used as guides for combining the scents.

Selecting Chemicals for Scent Re-creation

A scent which has been represented as a set of basis vectors in olfactory space can in principle be re-created simply by mixing the receptor primary scent components, receptor quasi-primary scent components, or receptor complex scent components needed to interact the olfactory receptors in the same pattern as the original scent. Such an approach requires 1) a method to generate a representation of the original scent in olfactory space, and 2) suitable receptor primary scent component chemicals which can be mixed in the appropriate manner.

Identification of receptor scent components can be performed by various methods. One such method assays the interaction of candidate components with each olfactory receptor. The receptors can be expressed *in vitro* and assays can be set up to monitor the interaction of various candidate components with each individual receptor. Chemicals which interact with one and only one olfactory receptor are receptor primary scent components, while chemicals which interact with more than one olfactory receptor are receptor complex scent components (and can possibly be receptor quasi-primary scent components, depending on the interaction profile it displays with the olfactory receptors). Such an approach can use methods known in the art, for example those of Breer *et al.*, Ann. N. Y. Acad. Sci. (1998) 855:175-81 or Malnic *et al.*, Cell (1999) 96(5):713-23. Breer *et al.* expressed olfactory receptors in Sf9 cells and evaluated the second-messenger response to various odorants. Malnic *et al.* isolated olfactory neurons from mice and utilized calcium imaging to study the response of the neurons to different odorants, while using RT-PCR to determine which olfactory receptor was expressed

in the neuron under study. U.S. Patent No. 5,798,275 describes a method for evaluating interaction of compounds with members of a reference panel of proteins. WO 98/50081 discloses methods for detecting particular odorant ligand specificity for particular odorant receptors in nasal epithelium tissue of mammals such as rats and mice.

5

Selection of Receptor Primary Scents by *in silico* Methods

An alternative method utilizes *in silico* screening techniques--that is, computer simulation methods--for selecting candidate components. Protein-ligand screening can be used to select compounds which bind to particular receptors in order to identify receptor primary
10 scent components. Examples of such programs are DOCK, AutoDock, GOLD, FlexX, LUDI, GROWMOL, and HOOK. (See Wang, J., Kollman, P.A., Kuntz I.D., "Flexible ligand docking: a multistep strategy approach," *Proteins* 36(1):1-19 (1999) and references therein.) These programs function by taking a protein structure and either matching compounds of known structure to the protein structure to determine the protein-ligand interaction, or by
15 "growing" a molecule in the active site or binding site of a protein to determine what molecule will best interact with the protein.

Olfactory receptor proteins are membrane proteins, and experimental determination of the three-dimensional structures of membrane proteins has lagged the corresponding structural determination of water-soluble proteins for various reasons. However, alternative methods for
20 constructing the three-dimensional structures of proteins are available. The primary (amino acid) sequences of many olfactory receptors are known. This information can be used to model a three-dimensional structure of a receptor protein using various algorithms and computer programs known in the art. The resulting model structure can then be used as the basis for evaluating interaction of candidate components with the receptor.

25 Alternatively, given known chemical structures which give rise to a particular odor, analysis of the structures can indicate the particular portion of the chemical structure which is responsible for the odor. This is analogous to "pharmacore analysis" used in medicinal chemistry to determine the important portion of drugs.

Methods for developing compounds which bind to receptors and other proteins of
30 known structure, and determining interactions between ligands and receptors, are described in various references. The DOCK program evaluates the fit of a ligand into a protein molecule of known structure (see Gschwend, D.A., Good, A.C. and Kuntz, I.D., "Molecular Docking Towards Drug Discovery", *J. Mol. Recognition* 9, 175-86 (1996); Kuntz, I.D., Meng, E.C., and

B.K. Shoichet, "Structure-Based Strategies For Drug Design and Discovery", *Acc. Chem. Res.* 27, 117-123 (1994); and Kuntz, I.D., "Structure-based strategies for drug design and discovery", *Science* 257, 1078-1082 (1992); see also

<http://www.cmp Pharm.ucsf.edu/kuntz/dock.html>). Using a known (or modeled) structure of an

5 olfactory receptor, DOCK can be used to screen for compounds which bind to the receptor.

The program AMBER (see Cornell, WD, Cieplak P, Bayly CI, Gould IR, Merz KM Jr, Ferguson DM, Spellmeyer DC, Fox T, Caldwell JW and Kollman PA. "A second generation force field for the simulation of proteins and nucleic acids," *Journal of the American Chemical*

10 *Society* 117, 5179-5197 (1995); Computer Simulation of Biomolecular Systems, A. Wilkinson, P. Weiner, W. Van Gunsteren, eds. Volume 3, p. 83-96, P. Kollman, R. Dixon, W. Cornell, T. Fox, C. Chipot and A. Pohorille; Bayly CI, Cieplak P, Cornell WD and Kollman PA. "A well-behaved electrostatic potential based method using charge restraints for deriving atomic charges - the RESP model," *Journal of Physical Chemistry* 97(40), 10269-10280 (1993);

Cornell WD, Cieplak P, Bayly CI and Kollman PA. "Application of RESP charges to calculate 15 conformational energies, hydrogen bond energies, and free energies of solvation," *Journal of the American Chemical Society* 115(21), 9620-9631 (1993); see also

<http://www.amber.ucsf.edu/amber/amber.html>) can be used to calculate more precise interaction energies between candidate ligands. Other examples of such methods are described in, for example, U.S. Patent No. 5,866,343, directed to determining the energetically favorable 20 binding site between two molecules; U.S. Patent No. 5,854,992, a system and method for structure-based drug design which takes into account binding free energy as it "grows" candidate molecules into a receptor binding site; and U.S. Patent No. 5,495,423, which describes a method for ligand design (principally applicable to peptidic ligands).

The foregoing methods typically depend on a known three-dimensional structure for the 25 receptor. When such a structure cannot or has not been determined experimentally, a structure can be modeled using computer algorithms. Blundell TL, Sibanda BL, Sternberg MJ, Thornton JM, "Knowledge-based prediction of protein structures and the design of novel molecules," *Nature* 326(6111):347-52 (1987); Shortle D, "Structure prediction: The state of the art," *Curr Biol* 9(6):R205-9 (1999), Morea V, Leplae R, Tramontano A, "Protein structure prediction and design," *Biotechnol Annu Rev* 4:177-214 (1998) and Onuchic JN, Luthey-Schulten Z, Wolynes PG, "Theory of protein folding: the energy landscape perspective," *Annu Rev Phys Chem* 30 48:545-600 (1997) address various methods of predicting protein structure from sequence data.

Various implementations for predicting protein structure from amino acid sequences are discussed in U.S. Patent Nos. 5,878,373 and 5,884,230.

If the structure, or even the identity, of the targeted receptor cannot be determined, alternative computational techniques can be used to generate information regarding possible ligands which will interact with the receptor. Quantitative structure-activity relationships (QSAR; see Green, S.M. and Marshall, G.R., "3-D QSAR: A current perspective," *Trends Pharmacol Sci* 16:285 (1995); and 3D QSAR in Drug Design: Theory, Methods and Applications, Kubinyi, H. Ed.; Escom, Leiden.), including QSAR refinements such as comparative molecular field analysis (ComFA) (Cramer, R. D. et al. "Comparative Molecular Field Analysis ComFA 1. Effect Of Shape On Binding Of Steroids To Carrier Proteins," *J. Am. Chem. Soc.* 110: 5959 (1988)); and pharmacophore mapping (Martin YC, Bures MG, Danaher EA, DeLazzer J, Lico I, Pavlik PA, "A fast new approach to pharmacophore mapping and its application to dopaminergic and benzodiazepine agonists," *J Comput Aided Mol Des* 7(1):83-102 (1993)) have been used to design pharmacophores that can interact with the receptor. U.S. Patent No. 5,699,268 provides a method for producing computer-simulated receptors which functionally mimic biological receptors; the simulated receptors are essentially abstractions of structurally useful information from compounds which are known to interact with a receptor. U.S. Patent No. 5,901,069 describes a method of automatically refining a set of chemicals using structure/activity data. U.S. Patent No. 5,862,514 describes a method of simulating synthesis of compounds of desired biological activity and evaluating their activity via further simulations.

Application of structure-function relationships to classification of odors has been described by Chastrette M., Rallet E. "Structure-minty odour relationships: Suggestion of an interaction pattern," *Flavour and Fragrance Journal*, 13(1):5-18 (1998); Chastrette M., De Saint Laumer J.Y., Peyraud J.F., "Adapting the structure of a neural network to extract chemical information. Application to structure-odour relationships," *SAR QSAR Environ Res* 1 (2-3):221-231 (1993), Chastrette M., "Trends in structure-odor relationships," *SAR QSAR Environ Res* 6(3-4):215-254 (1997) and Jain et al., "A shape-based machine learning tool for drug design," *J Comput Aided Mol Des* 8(6):635-652 (1994). These methods can be useful in determining the "chemical distance" between odors. For example, isoamyl acetate is typically experienced as a banana-like odor, while octyl acetate is typically experienced as an orange-like odor, which gives a measure of how the chain length of the alkoxy portion of the ester influences perception.

Olfactory Receptors and Libraries of Olfactory Receptors

The olfactory receptors of the invention can be used to analyze and describe the interaction of scent odorant molecules with each receptor. This can be done individually, receptor-by-receptor and odorant molecule by odorant molecule. However, a combinatorial approach provides a much more powerful method of analyzing and describing the interaction of scent odorant molecules with olfactory receptors.

In one embodiment, the invention comprises libraries of olfactory receptors. These libraries are used to screen compositions for interaction with receptors. A composition can be a single compound (essentially a pure chemical), or a mixture of two or more compounds or chemicals. The compositions can be presented to the library in vapor form, or in solutions, typically aqueous solutions.

The method for determining the binding pattern of a composition with olfactory receptors comprises the steps of: exposing the composition to an olfactory receptor library; and determining whether the composition binds to each olfactory receptor of the library, thereby determining the overall binding pattern of the composition. While it is desirable to determine whether the composition binds to each of the olfactory receptors, in certain cases, determining the binding pattern to a subset of the receptors is suitable. Such a situation can arise if the complete pattern is not needed, or if the experiment cannot determine binding to a receptor for a particular reason. (Determining the binding to a subset is equivalent to reducing the olfactory receptor library to that subset of receptors.)

Typically, the libraries are prepared as arrays, where the position of each olfactory receptor is known on the array. The arrays can take the form of multiwell plates, solid substrates such as chips or wafers, or any other form allowing identification of the receptor location. The arrays can be prepared in order to simply assess binding, or can be prepared in order to assess degree of activation as described above, using, for example, the technique of Malnic *et al.*, *Cell* 1999 96, 713-723. Alternatively, an *in silico* array of structures can be prepared, using the known primary structure of the receptors and the modeling techniques described above.

The libraries contain at least two olfactory receptors. In increasing order of preference, the libraries contain at least 5, 10, 20, 30, 40, 50, 75, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1500, 1600, 1800, or 2000 olfactory receptors. The

receptors are presented as ordered arrays. For example, a 96-well plate can contain 96 receptor preparations. Upon exposure to a composition, the plate can be scanned, and the response of each receptor in each well can be evaluated. This leads to a 96-element vector description of the composition in terms of those 96 olfactory receptors.

5 In one embodiment, binding to the olfactory receptors is assessed. In another embodiment, the approximate binding constant of the composition to the olfactory receptors is determined. In yet another embodiment, the degree of activation of the olfactory receptor by the composition is determined. For receptor antagonists, binding will occur, but no activation will occur; the invention embraces the identification of such
10 antagonists.

 The compositions for use are varied. A set of all volatile compounds can be used. A standard set of perfumes or odorants can be used. A set of commercially used scents can be used. Sets of compounds particularly useful in the invention are disclosed in co-pending United States Patent Application Serial No. 09/620,753. However, it must be emphasized
15 that the invention is not limited to any one set or classification of compounds.

 Preferred subsets of olfactory receptor polynucleotide sequences include:

SEQ ID NOS: 163, 331, 414, 425, 672, 762, 919, and 1027;

SEQ ID NOS: 809 and 1067;

SEQ ID NO: 744;

20 SEQ ID NOS: 207, 336, 441, and 615;

SEQ ID NOS: 157, 168, 197, 221, 250, 334, 340, 412, 413, 459, 491, 618, 690,
694, 759, 760, 761, 767, 819, 860, 872, 873, 917, 936, 939, 940, 947, 952, 958, 959, 1023,
1034, 1038, 1043, and 1044;

SEQ ID NOS: 783, 785, 882, 888, 922, and 925;

25 SEQ ID NOS: 707, 748, 752, 755, 756, 790, and 997;

SEQ ID NOS: 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075,
1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, and 1084;

SEQ ID NOS: 163, 239, 331, 335, 368, 381, 385, 414, 425, 514, 572, 596, 603,
628, 638, 642, 672, 674, 689, 744, 762, 809, 835, 885, 896, 919, 920, 938, 948, 972, 999,
30 1007, 1014, and 1027;

SEQ ID NOS: 164, 173, 176, 180, 182, 184, 185, 188, 190, 194, 207, 210, 213, 214,
215, 217, 219, 220, 223, 226, 227, 229, 230, 234, 235, 240, 249, 255, 265, 270, 273, 274,

276, 277, 279, 281, 289, 291, 293, 294, 298, 302, 307, 311, 318, 319, 321, 330, 336, 339,
341, 342, 343, 348, 351, 356, 359, 361, 365, 366, 367, 368, 370, 372, 373, 374, 375, 376,
378, 379, 380, 382, 383, 384, 385, 388, 391, 392, 393, 398, 400, 401, 403, 408, 420, 423,
427, 428, 431, 434, 435, 438, 439, 440, 441, 447, 448, 450, 455, 458, 464, 465, 468, 471,
5 473, 474, 475, 478, 479, 481, 482, 484, 485, 492, 494, 499, 502, 508, 511, 512, 513, 515,
526, 532, 534, 541, 543, 545, 546, 550, 552, 553, 557, 558, 560, 563, 564, 568, 572, 576,
582, 583, 584, 585, 586, 588, 599, 600, 605, 606, 607, 608, 609, 610, 615, 620, 621, 631,
632, 636, 638, 640, 642, 645, 648, 650, 651, 652, 654, 656, 657, 661, 662, 664, 668, 679,
680, 686, 687, 689, 691, 696, 699, 700, 702, 706, 713, 720, 721, 723, 729, 734, 738, 745,
10 768, 772, 773, 775, 791, 798, 799, 823, 857, 898, 900, 901, 903, 914, 931, 933, 937, 941,
945, 948, 956, 965, 969, 983, 992, 993, 994, 999, 1003, 1005, 1009, 1010, 1011, 1019,
1028, 1035, 1037, 1052, 1061, 1062, and 1063

SEQ ID NOS: 157, 161, 163, 168, 197, 200, 205, 218, 221, 242, 250, 331, 334,
340, 412, 413, 414, 419, 425, 452, 453, 454, 456, 459, 462, 491, 591, 618, 622, 663, 665,
15 667, 670, 672, 690, 694, 695, 709, 759, 760, 761, 762, 767, 819, 820, 822, 826, 832, 846,
847, 860, 872, 873, 877, 881, 887, 908, 911, 913, 917, 919, 921, 936, 939, 940, 942, 944,
947, 951, 952, 955, 958, 959, 960, 964, 975, 977, 979, 986, 1023, 1027, 1034, 1038, 1043,
1044, 1049, and 1051;

SEQ ID NOS: 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 165, 166,
20 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184,
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15 668, 669, 670, 671, 673, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687,
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707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724,
725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742,
743, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761,
20 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780,
781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798,
799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 810, 811, 812, 813, 814, 815, 816, 817,
818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 836,
837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854,
25 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872,
873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 886, 887, 888, 889, 890, 891,
892, 893, 894, 895, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910,
911, 912, 913, 914, 915, 916, 917, 918, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930,
931, 932, 933, 934, 935, 936, 937, 939, 940, 941, 942, 943, 944, 945, 946, 947, 949, 950,
30 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968,
969, 970, 971, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987,
988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 1000, 1001, 1002, 1003, 1004, 1005,

1006, 1008, 1009, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1019, 1020, 1021,
1022, 1023, 1024, 1025, 1026, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036,
1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050,
1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, and 1064;

5 and any and all combinations of the foregoing sets.

The polypeptide translation products of those polynucleotide sequences form sets of preferred olfactory receptor polypeptides, as well as any and all combinations of those polypeptide sets. The preferred sets of polypeptide translation products, and any and all combinations thereof, are also preferred sets for use as libraries of olfactory receptors for
10 scent analysis.

Scent Fingerprinting

It will be appreciated that in many instances, analysis of a scent (whether in terms of
15 receptor primary scent components, receptor quasi-primary scent components, receptor complex scent components, or other scent representations) is of great utility in and of itself, in addition to the utility of that analysis in scent re-creation. Thus, another embodiment of the invention encompasses "scent fingerprinting," which comprises analysis of a scent profile when re-creation of that scent may not be necessary or desirable. The distinction between scent
20 profiling, as defined above, and scent fingerprinting, as defined here, is that scent profiling is a representation of a scent relative to a mammalian olfactory system in such a manner as to provide useful information about the interaction of the scent with that olfactory system, such as sufficient information to enable re-creation of the scent from receptor primary scent components. In contrast, scent fingerprinting can, but does not necessarily, provide such
25 information.

Various applications and examples of scent fingerprinting can include, but are not limited to, the following illustrative situations. Natural gas is widely used as a heating and fuel supply, but is in itself odorless. Utility companies routinely add small amounts of odorants such as mercaptans to allow detection of natural gas leaks in households. Should a leak occur
30 at an unattended site, however, potentially dangerous quantities of natural gas can accumulate. In such areas, a device which can recognize odorants would be useful.

Another use of scent fingerprinting is quality control of a manufacturing process. Many food items, such as freshly-baked bread and pastries, sauces, and cheeses, have distinct

odors. A manufacturer can record a scent fingerprint for a given food item, e.g. spaghetti sauce for packaging in jars. The quality of the product can then be monitored at various stages in manufacture and storage, and deviations from the established scent fingerprint can be used to alert the manufacturer to problems in manufacture or storage. Quality control scent fingerprints are not limited to food items, but can be used in any circumstance where a volatile component of an item of manufacture can be used as a quality control indicator, e.g., perfume, deodorants, solvent mixtures, etc.

While scent fingerprints need not be meaningful in terms of a mammalian olfactory system, it will be readily appreciated that a scent profile, which does represent a scent in a manner relevant to an olfactory system, is a special type of scent fingerprint. Additionally, the response of a device which yields a scent fingerprint of an odor (such as the "artificial nose" described in U.S. Pat. Nos. 5,571,401, 5,698,089, 5,788,833, 5,891,398 and 5,911,872) can be calibrated against the response of a mammalian olfactory system in order to transform the scent fingerprint generated by the device into a true scent profile which can be utilized to re-create an odor using receptor primary scent components, receptor quasi-primary scent components, or receptor complex scent components. The invention encompasses such data transformations.

Scent Editing

Representation of a scent as a scent profile provides the capability of editing the scent. A scent profile which represents a scent in terms of perceptive primary scent components is the most straightforward representation to edit. An example is the perceptive complex primary scent of "burned pizza" comprised of perceptive primary scent components of sausage, cheese, tomato sauce, and burned dough. In order to edit the scent to provide a more pleasant re-creation, the perceptive primary scent component of burned dough would simply be eliminated.

Other scent profiles can be edited using a knowledge of the perception of a particular components. Using our six-receptor example, suppose that the (1, 0, 0, 0, 1, 0) receptor complex scent component is known to provide an unpleasant aspect of the scent, while the (0, 1, 1, 1, 0, 1) component is known to provide the pleasant aspect of the scent. The first complex scent component can be omitted from the edited scent profile, leaving (0, 1, 1, 1, 0, 1) as the edited scent profile. (This would also alter the index values for scent re-creation, from 1 and 1, to 0 and 1.) More complex editing situations can be manipulated using computer algorithms as discussed above.

Individual scent components can be omitted, added, weakened, or intensified, and different scent components can be adjusted in different manners or degrees, depending on the desired result. The editing can be done interactively, with each edited scent emitted by the emitter module for evaluation by the user, or can be done automatically, with
5 removal/weakening or addition/intensifying of particular components specified in advance, on either an absolute scale or relative to other components.

The following examples are presented to illustrate, but not to limit, the invention.

EXAMPLES

10 **Example 1: Isolation of human olfactory receptor cDNAs**

Total RNA was extracted from human olfactory epithelium and polyA⁺ RNA was obtained by oligo-dT selection. This RNA served as template for cDNA synthesis using reagents from the SMART cDNA Library construction kit (Clontech K1051-1; Palo Alto, CA). The Superscript IITM reverse transcriptase (Life Technologies, Gaithersburg, MD)
15 was used for first-strand synthesis.

Double-stranded cDNA was passed through a Chroma-Spin⁺ STE-100 column (Clontech) to remove unreacted primers and cDNA fragments shorter than 100 nucleotides. The olfactory epithelial cDNA population was then subjected to amplification using primers homologous to conserved regions in GPCRs. The first primer set was homologous
20 to transmembrane segment 2 (TM2) and the second set was homologous to TM 7.5. The TM2 primer set contained 32 oligonucleotides, representing all possible nucleotide sequences capable of encoding the TM2 amino acid sequence motif P-M-Y-F/L-F/Y-F/L, and designed to be non-degenerate at their 3' ends. Sequences of the TM2 primers are as follows:

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30

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CCN ATG TAY TTN CTC CTA	SEQ ID NO: 74
CCN ATG TAY TTN CTC CTC	SEQ ID NO: 75
CCN ATG TAY TTN CTC CTG	SEQ ID NO: 76
CCN ATG TAY TTN CTC CTT	SEQ ID NO: 77
CCN ATG TAY TTN CTC TTA	SEQ ID NO: 78
CCN ATG TAY TTN CTC TTC	SEQ ID NO: 79
CCN ATG TAY TTN CTC TTG	SEQ ID NO: 80
CCN ATG TAY TTN CTC TTT	SEQ ID NO: 81
CCN ATG TAY TTN CTT CTA	SEQ ID NO: 82
CCN ATG TAY TTN CTT CTC	SEQ ID NO: 83
CCN ATG TAY TTN CTT CTG	SEQ ID NO: 84

	CCN ATG TAY TTN CTT CTT	SEQ ID NO: 85
	CCN ATG TAY TTN CTT TTA	SEQ ID NO: 86
	CCN ATG TAY TTN CTT TTC	SEQ ID NO: 87
	CCN ATG TAY TTN CTT TTG	SEQ ID NO: 88
5	CCN ATG TAY TTN CTT TTT	SEQ ID NO: 89
	CCN ATG TAY TTN TTC CTA	SEQ ID NO: 90
	CCN ATG TAY TTN TTC CTC	SEQ ID NO: 91
	CCN ATG TAY TTN TTC CTG	SEQ ID NO: 92
	CCN ATG TAY TTN TTC CTT	SEQ ID NO: 93
10	CCN ATG TAY TTN TTC TTA	SEQ ID NO: 94
	CCN ATG TAY TTN TTC TTC	SEQ ID NO: 95
	CCN ATG TAY TTN TTC TTG	SEQ ID NO: 96
	CCN ATG TAY TTN TTC TTT	SEQ ID NO: 97
	CCN ATG TAY TTN TTT CTA	SEQ ID NO: 98
15	CCN ATG TAY TTN TTT CTC	SEQ ID NO: 99
	CCN ATG TAY TTN TTT CTG	SEQ ID NO: 100
	CCN ATG TAY TTN TTT CTT	SEQ ID NO: 101
	CCN ATG TAY TTN TTT TTA	SEQ ID NO: 102
	CCN ATG TAY TTN TTT TTC	SEQ ID NO: 103
20	CCN ATG TAY TTN TTT TTG	SEQ ID NO: 104
	CCN ATG TAY TTN TTT TTT	SEQ ID NO: 105

The TM7.5 primer set was designed to contain the reverse complement of all sequences capable of encoding the TM7.5 amino acid sequence motif P-F/L/I/V-I/V-F/Y-S/T-L. The sequences of the TM7.5 primers are as follows:

	YYTNGTNYTNRYNCYGATANATNATNGGRTT	SEQ ID NO: 106
	YTRTTNCKNAGNWRTANATRAANGGRTT	SEQ ID NO: 107
	TCYTTRTTNCKNAGNGWRTANAYNASNGGRTT	SEQ ID NO: 108
30	TCNTSRTTNCKNARNSARTANATNATNGGRTT	SEQ ID NO: 109
	RTTNCKNARNSWRTANATRAANGGRTT	SEQ ID NO: 110

Reagents and enzymes for amplification were from the Advantage cDNA amplification kit (Clontech). A primary amplification reaction was constructed as follows:

35 5 µl olfactory epithelial cDNA (10-20 µg/ml)

 5 µl 10X PCR reaction buffer (Clontech)

 1 µl TM2 primer set (10 µM)

 1 µl TM7.5 primer set (10 µM)

 1 µl dNTP mix (10 mM each dATP, dCTP, dGTP, dTTP)

40 36 µl PCR-grade H₂O

 1 µl Advantage polymerase mix (Clontech)

Amplification was conducted in a PE 480 thermal cycler, using 28 cycles of 95°C for 15 sec, 45°C for 45 sec and 72°C for 2 min. After cycling, the amplification mixture was treated for 1 hour at 37°C with 10 Units of BspEI and 10 Units of PstI restriction enzymes, to degrade non-specific amplification products.

5 The primary amplification products were size-fractionated by agarose gel electrophoresis, and amplification products having a length between 600 and 800 base pairs were selected for secondary amplification.

10 The secondary amplification reaction was conducted identically to the primary amplification reaction, except that the size-selected primary amplification product was used as template. Secondary amplification reactions containing products which generated a specific gel band of between 600 and 800 base pairs were extracted once with phenol/chloroform and once with chloroform, and nucleic acids were precipitated from the reactions by addition of 0.1 volume of 3M NaOAc (pH 4.8), 20 µg glycogen, and 1.5 volumes of cold 95% ethanol. The precipitate was collected by centrifugation, dried and
15 resuspended in 15 µl distilled water. After the precipitate dissolved, 3 µl loading dye was added, and the sample was subjected to electrophoresis on a 1.0% low-melting agarose gel containing ethidium bromide. Electrophoresis was conducted at 60V for approximately 40 min, with a 1 kb marker in adjoining lanes.

20 Following electrophoresis, the gel was illuminated with long-wavelength ultraviolet light, and the band was excised from the gel. The gel slice was placed in a 0.5 ml tube, and the tube was heated at 68°C for 15 min. The temperature of the tube was then equilibrated at 45°C. (This is conveniently accomplished in a thermal cycler.) AgarACE™ (Promega) was then added to the tubes, according to the manufacturer's instructions, and incubation at 45°C was continued for 15 min. As a general rule, 2 µl of enzyme per 50 µl of gel slice is
25 adequate. Following AgarACE™ digestion, the digestion mixture was extracted with phenol/chloroform according to the manufacturer's instructions, and nucleic acids were precipitated by addition of 0.1 volume of 3M NaOAc (pH 4.8), 20 µg glycogen, and 1.5 volumes of cold 95% ethanol. The precipitate was collected by centrifugation, dried and resuspended in 5 µl distilled water.

30 Gel-purified amplification products were cloned using the TOPO XL PCR Cloning Kit (Invitrogen) according to the manufacturer's instructions. After cloning, individual

colonies were selected at random for nucleotide sequence analysis of the inserts, using procedures for sequence determination that are well-known to those of skill in the art.

Example 2: Use of olfactory receptor polypeptides for screening

5 Components of a scent are identified by determining the interaction between one or more potential odorant molecules and one or more OR polypeptides. For example, if a known original scent involves binding to a particular set of ORs, any subsequent set of molecules which bind to that same set of ORs and stimulate or inhibit the response of the ORs to the same extent as the original scent is capable of re-creating that original scent. If
10 each of the subsequent set of molecules interacts with one and only one OR, then the set of molecules is composed of receptor primary scent components. In similar fashion, scents which involve binding of multiple ORs can be recreated by identifying a molecule, or combination of molecules, which binds to that particular set of ORs.

 Binding of molecules to ORs is determined by a number of methods that are well-
15 known in the art including, but not limited to, in vitro and in silico methods as described herein. Binding of molecules to ORs can also be determined or approximated by using quantitative structure-activity relationships as described herein.

Example 3: Identification of agonists and antagonists of olfactory receptors

20 Interaction of an odorant with a particular OR embedded in the membrane of an olfactory neuron will activate a signaling cascade within the neuron, ultimately resulting in the perception of a particular smell. A molecule, produced for example by combinatorial chemistry, which activates a similar or identical signaling cascade, will induce the perception of the same smell. Such a molecule would be considered a OR agonist. An OR
25 agonist, once identified, can be used as a probe to identify additional agonists, as well as antagonists, of that particular OR.

 Assays for the activation and the end product(s) of signaling cascades are known in the art. For example, direct Ca^{++} imaging can be employed, using either dye -labeled Ca^{++} or dyes that are sensitive to Ca^{++} concentration. Such dyes, and techniques for their use,
30 are available from, for example, Molecular Dynamics (Sunnyvale, CA) and Molecular Probes (Eugene, OR).

Because ORs are transmembrane proteins, identification of agonists and/or antagonists for a particular OR require that the OR is present either in a living cell or in a membrane preparation.

In one embodiment of a method for the determination of OR agonists or
5 antagonists, a known OR agonist is labeled *in situ*, or is resynthesized with an attached label, and is bound to an OR. The effect of various test molecules on the binding of the labeled OR agonist is then determined. Labeling of an OR agonist is accomplished by any of a number of methods that are known to those of skill in the art including, but not limited to, various fluorescent labels (for example, chemical fluorochromes or green fluorescent
10 protein). Binding of the OR agonist is measured by any of a number of competitive binding assays, as are known in the art. A test molecule that displaces the agonist from the OR (*i.e.*, reduces the binding of the agonist) is identified as a candidate agonist or antagonist of the particular OR. In a subsequent experiment, the candidate molecule is bound to the OR, and the effect on the signaling cascade induced by the original agonist is
15 determined. A similar of higher level of activation is indicative of an agonist; while a reduced level of activation of the signaling cascade reflects the action of an antagonist.

In additional embodiments of the displacement assay, an unlabeled agonist is used, and its degree of binding is determined by mass spectrometry. *See*, for example, U.S. Patent No. 5,894,063; U.S. Patent No. 5,719,060; and Wei *et al.* (1999) *Nature* 399:243-
20 246.

In another embodiment, fluorescent microparticles ("beads"), which can be separated by flow cytometry, are used to identify OR agonists and antagonists. Such beads are available, for example, from Luminex (Austin, TX). Multiple different ORs are attached to the beads, wherein each distinct color of bead is associated with a particular
25 OR. The collection of beads, containing different ORs, is exposed to a test molecule or a collection of test molecules, such as can be synthesized by combinatorial chemistry, and binding of the test molecule(s) is determined, for example, by use of a labeled ligand of the test molecule(s). The beads are sorted according to their color by flow cytometry. Correlation of test molecule binding with bead color allows the determination of test
30 molecules capable of binding to the OR. Agonist or antagonist function of an OR binding molecule is determined by methods described *supra*.

Example 4: Summary of search parameters for homology searches

Step 1: (masking) rempolyatmask raw sequence on -NONE- [?] with remAT_moderate (15) . Continue to step 2.

Step 2: (masking) mask masked sequence from step 1 on RepBase [N] with
5 mask_moderate (85) . Continue to step 3.

Step 3: (masking) mask masked sequence from step 2 on VecBase [N] with
mask_moderate (85) . Continue to step 4.

Step 4: blastn masked sequence from step 3 on NR-Nuc [N] with blastn_10_hits (V=10
B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 5. Otherwise, stop.

10 Step 5: blastx masked sequence from step 3 on NR-Pro [P] with blastx_10_hits (V=10
B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 6. Otherwise, stop.

Step 6: blastn masked sequence from step 3 on GB_CurAwareness-Nuc [N] with
blastn_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step
7. Otherwise, stop.

15 Step 7: blastx masked sequence from step 3 on GB_CurAwareness-Pro [P] with
blastx_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step
8. Otherwise, stop.

Step 8: tblastx masked sequence from step 3 on NR-Nuc [N] with tblastx_10_hits (V=10
B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 9. Otherwise, stop.

20 Step 9: blastn masked sequence from step 3 on EST [N] with blastn_10_hits (V=10 B=10) .
If the P/Z score is $> 1.0E-50$, or no hits are found go to step 10. Otherwise, stop.

Step 10: blastn masked sequence from step 3 on STS [N] with blastn_10_hits (V=10 B=10)
. Stop.

25

Example 5: Summary of search results

Step	Program	Database	Score	Sequences By Best Hit's Score				No Hits	Run	Not Finished	Not Run
1	rempolyat mask	NONE-[P]	P/Z/E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0
2	mask	RepBase[N]	P/Z/E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0
3	mask	VecBase[N]	P/Z/E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0
4	blastn	NR-Nuc[N]	P/Z/E	46	< 1.0E-20 <=	28		0	74	0	0
5	blastx	NR-Pro[P]	P/Z/E	16	< 1.0E-20 <=	34		0	50	0	24
6	blastn	GB_CurAwareness-Nuc[N]	P/Z/E	17	< 1.0E-20 <=	31		0	48	0	26
7	blastx	GB_CurAwareness-Pro[P]	P/Z/E	13	< 1.0E-20 <=	28		2	43	0	31
8	tblastx	NR-Nuc[N]	P/Z/E	14	< 1.0E-20 <=	29		0	43	0	31
9	blastn	EST[N]	P/Z/E	10	< 1.0E-20 <=	33		0	43	0	31
10	blastn	STS[N]	P/Z/E	5	< 1.0E-20 <=	33		0	38		

5

Example 6. Datamining and analysis from GenBank

Datamining. A datamining pipeline was built to detect all available OR-like sequences in the public databases and to update the results as new database versions are released. *tblastn* (Altschul et al., 1997) was used to compare amino acid query sequences to the non-redundant version of GenBank (partitions nt, htg and est_human, all updated to August 6th, 2000), with a non-stringent expectation value cutoff of $1e-4$. The queries used included 96 curated OR sequences representing all known families (SEQ ID NO:2651 through SEQ ID NO:2747) and 249 additional HORDE entries (SEQ ID NO:2402 through SEQ ID NO:2650). In a second round 105 newly mined mouse genes (SEQ ID NO:2296 through SEQ ID NO:2401) and 344 newly mined human genes (SEQ ID NO:2009 through SEQ ID NO:2295) were used as additional queries (all datasets are available

electronically). All resulting database entries were catalogued by species and subdivided into four types: mRNA, EST, DNA and genomic, the latter including entries annotated with keyword HTGS_PHASE1-3, or with length at least 10 kb. Low-pass genomic sampling sequences were ignored (keyword HTGS_PHASE0). In addition, a set of 132 olfactory sequence tag (OST) sequences was used. All sequences used were split into contigs according to annotation or, where unavailable, according to runs of at least 50 Ns. All resulting contigs were analyzed for interspersed repeats using RepeatMasker (Smit and Green, 1997). Subcontigs were defined as segments between interspersed repeats, ignoring simple repeats and low-complexity regions.

10 *Localization of genomic clones.* The University of Santa Cruz (UCSC) Working Draft Sequence ("golden path", <http://genome.ucsc.edu>) presents a first tentative assembly of the finished and draft human genomic sequence based on the WUSTL clone map (<http://genome.wustl.edu/gsc>). The "golden path" data was used to assign a coordinate to each finished or unfinished genomic clone, in Mb from the p telomere. In parallel, the
15 Unified DataBase (UDB) was used to assign similar Mb coordinates to the clones, based on their marker contents (Chalifa-Caspi et al., 1998). The two maps are largely colinear, and were integrated based on the coordinates of clones that could be localized in both. Clones for which no coordinate could be obtained by either method were assigned a chromosome according to UDB, by sequence similarity to another mapped clone, by annotation, or by e-
20 PCR (Schuler, 1997).

Detection of OR sequences. Each subcontig was compared using FASTY (Pearson et al., 1997) to a curated set of OR protein sequences from several species, yielding a conceptual translation product. The possibility of a pseudogene being disrupted by the insertion of interspersed repeats was taken into account, with the two or more resulting
25 parts being therefore located in different subcontigs. Such compatible candidate sequences were automatically joined into a combined reconstructed pseudogene. Whenever possible, all resulting sequences were trimmed or extended to use a suitable ATG codon for initiation and to end at a stop codon, but avoiding those stop codons that yield products shorter than 275 amino acids. The sequences were finally split into OR or non-OR by comparing them
30 to previously recognized OR sequences and to a non-redundant database of non-OR GPCRs which we extracted from Swiss-Prot. To be automatically classified as an OR, a

new sequence has to be at least 40% identical over at least 100 amino acids to another OR. A more stringent cutoff (50%) was required for shorter sequences.

Definition of OR genes. A given gene could be represented in more than one overlapping genomic clone. Such redundancy was removed by considering two sequences
5 as representing the same gene, if they are in the same chromosome, located in clones less than 300 kb apart and at least 99% identical at the nucleotide level. An exception to this rule is when two genes coappear in the same clone, in which case they were considered to be distinct genes. Sequences localized to a chromosome but without a coordinate were only compared to other sequences within that chromosome, and finally those sequences
10 lacking a chromosomal assignment were compared to the rest, applying only the criterion of sequence similarity. For each resulting gene with more than one constituent sequence, a consensus nucleotide sequence was created after multiple alignment by ClustalW (Higgins et al., 1996) using the fast comparison parameter. This was followed by conceptual translation and end trimming to suitable start and stop codons, as above. Genes with length
15 at least 275 amino acids without frame disruptions (frameshifts, in-frame stop codons or disrupting interspersed repeats) were considered to be full-length and apparently intact. For partial sequences without frame disruptions no statement could be made on their apparent functionality, except when the partial sequences were observed in the genome as such, in which case they were considered to be pseudogenes. Finally, each OR gene was
20 assigned a family and subfamily by amino acid sequence similarity to previously classified OR genes.

The references cited in this example are: Altschul, S. F., Madden, T. L., Schaffer, A. A., Zhang, J., Zhang, Z., Miller, W. and Lipman, D. J. (1997) Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. *Nucleic Acids Res* 25:
25 3389-402; Chalifa-Caspi, V., Prilusky, J. and Lancet, D. (1998) The Unified Database. Weizmann Institute of Science, Bioinformatics Unit and Genome Center (Rehovot, Israel). World Wide Web URL: bioinformatics.weizmann.ac.il/udb; Higgins, D. G., Thompson, J. D. and Gibson, T. J. (1996) Using CLUSTAL for multiple sequence alignments. *Methods Enzymol* 266: 383-402; Pearson, W. R., Wood, T., Zhang, Z. and Miller, W. (1997)
30 Comparison of DNA sequences with protein sequences. *Genomics* 46: 24-36; Schuler, G. D. (1997) Sequence mapping by electronic PCR. *Genome Res* 7: 541-50; and Smit, A. F.

A. and Green, P. (1997) RepeatMasker at URL: repeatmasker.genome.washington.edu/cgi-bin/RM2_req.pl.

Tables 1 and 2 contain additional information regarding SEQ ID NO. 153 to SEQ ID NO. 1085. The explanation of the entries in Tables 1 and 2 is as follows:

Symbol: The Human Genome Organization gene symbol, as allotted by a procedure to be published soon. OR = Olfactory Receptor, numeral to the immediate right - family designation, capital letters - subfamily designation, rightmost numeral - individual gene within subfamily, n appearing when such number is not assigned yet; P = Pseudogene.

10 All ORs within a family share at least 40% protein sequence identity.

All ORs within a subfamily share at least 60% protein sequence identity.

HORDE: The H serial number within the Human Olfactory Receptor Data Exploratorium (URL bioinfo.weizmann.ac.il/HORDE). The numeral 38 represents the HORDE build (version), gxxx is the individual gene number.

15 Digi: Appearance of a DSnn serial number here means that the sequence has been PCR-amplified from human olfactory epithelial cDNA using degenerate primers at the transmembrane helix 2 and transmembrane helix 7. See separate page for explanations on the analysis of the DS entries.

OST: OSTnnn is the serial number of the sequence in the Olfactory Sequence Tag collection in the Lancet laboratory (URL bioinfo.weizmann.ac.il/HORDE). Appearance here means that the sequence has been PCR-amplified from human genomic DNA using degenerate primers at the transmembrane helix 2 and transmembrane helix 7. There are a total of 112 OST sequences.

Trivial name: One or more aliases given to the same gene by different laboratories. 25 Many of the trivial names are of the form ORnn-xx, whereby nn is a chromosome number and xx is an arbitrary numerical identifier.

Tran: (transcribed) Plus appears if the entry was sequenced from cDNA, or was found in the Expressed Sequence Tags (EST) databases. Plus also appears if in the public databases the gene was annotated as mRNA.

30 Int.: (intact) "Yes" indicates that the gene may be intact, as there are no obvious sequence frame disruptions. "Put" (putative) indicates the same, except that the known sequence is short, hence there may be disruptions in the unsequenced segments. "Pol"

indicates a polymorphism between intact and pseudogenic alleles. When no word appears, this indicates a pseudogene.

E: (Extent) FL indicates that the Full Length sequence is known (typically 310 ± 30 amino acids).

5 D: The number of sequence disruptions in the known sequence of a pseudogene.

C: The human chromosomal location of the OR gene, assigned as described under Mb coord.

Mb coord: The location of the OR gene within a human chromosome, in megabase units, beginning at the p-telomere and ending at the q-telomere, computed based on
10 integrating information from Unified Database (URL is bioinfo.weizmann.ac.il/udb) and the University of California Santa Cruz (URL is genome.ucsc.edu).

CDR: The 17 amino acids suggested to line the odorant ligand binding pocket, delineated by the extracellular 2/3 of transmembrane helices 3,4 and 5. The assignment is based on an algorithm at URL

15 bioinformatics.weizman.ac.il/HORDE/humanGenes/CDR.html.

%: (% id) The percent protein identity between the human sequence in the current line and the known rodent (rat or mouse) OR sequence to which it bears the highest similarity.

S: (Species) Rat (R) or mouse (M).

20 Acc: The Genbank accession number of the clone that contains the rodent sequence.

Range: The positions x ... y of the first and last bases within the rodent which constitute the OR coding region. If $x > y$ then the OR is on the reverse strand.

Table 1

25

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
153	OR10D3	H38g001			HSHTPCR09			
154	OR7EnP	H38g002						FL
155	OR1D5	H38g003		OST901	OR17-31	+	pol	FL
156	OR10NnP	H38g00						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
157	OR2F1	H38g00 5		OST902	OLF3;OR7-139;OR7-140	+	yes	FL
158	OR7EnP	H38g00 6						FL
159	OR8FnP	H38g00 7						FL
160	OR2Q1P	H38g00 8			DJ0669B10;OR7-2			FL
161	OR2W1	H38g00 9			AL035402- B;dJ88J8.1;hs6M1-15		yes	FL
162	OR7EnP	H38g01 0				+		FL
163	OR6B1	H38g01 1	DS119		OR7- 3;WUGSC:H_DJ0669B10. 3	+	yes	FL
164	OR10Kn	H38g01 2					yes	FL
165	ORnP	H38g01 3				+		FL
166	OR4F2P	H38g01 4			HS191N21;dJ191N21.4; hs6M1-11			FL
167	OR7EnP	H38g01 5						FL
168	OR1F2P	H38g01 6			OLFMF2	+	yes	FL
169	OR2P1P	H38g01 7			AL035402- A;dJ88J8.2;hs6M1-26			
170	OR7E43P	H38g01 8		OST903	OR4-116			FL
171	OR4F1	H38g01 9			HSDJ0609N19			FL
172	OR7E55P	H38g02 0		OST904	OR2DG;OR3.2			FL
173	OR13Dn	H38g02 1					yes	FL
174	OR4CnP	H38g02 2						FL
175	OR10D1P	H38g02 3		OST074	HSHTPCR03	+		FL
176	OR4Cn	H38g02					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
177	OR8GnP	H38g02 5						
178	OR13CnP	H38g02 6						FL
179	OR4CnP	H38g02 7						FL
180	OR13Cn	H38g02 8					yes	FL
181	OR4CnP	H38g02 9						
182	OR51Bn	H38g03 0					yes	FL
183	OR7E5P	H38g03 1		OST905	OR11-12			FL
184	OR13Cn	H38g03 2					yes	FL
185	OR4Sn	H38g03 3					yes	FL
186	OR51BnP	H38g03 4						FL
187	OR6JnP	H38g03 5						FL
188	OR51Bn	H38g03 6					yes	FL
189	OR7EnP	H38g03 7						FL
190	OR2An	H38g03 8					yes	FL
191	OR7E22P	H38g03 9			OR3.6;OR6DG			FL
192	OR7E4P	H38g04 0			OR11-11a			FL
193	OR7E66P	H38g04 1		OST906	OR3.3;OR3DG;hg630			FL
194	OR6Mn	H38g04 2					yes	FL
195	OR2ALnP	H38g04 3						
196	OR6MnP	H38g04 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
197	OR4D1	H38g04 5			AC005962-A;HSTPCR16	+	yes	FL
198	OR5D2P	H38g04 6		OST907	OR11-7a;OR912-91			FL
199	OR7E38P	H38g04 7		OST127	AC004967	+		FL
200	OR4D2	H38g04 8			AC005962-B		yes	FL
201	OR7E7P	H38g04 9			AC004967-A			FL
202	OR5AHnP	H38g05 0						
203	OR2U2P	H38g05 1			AL050339- B;dJ974I11.2;hs6M1- 23			FL
204	OR2U1P	H38g05 2			974I11;AL050339- C;dJ974I11.3;hs6M1- 24			FL
205	OR2H2	H38g05 3			AC006137- A;dJ271M21.2;hs6M1- 12		yes	FL
206	OR2H5P	H38g05 4		OST616	HS271M21;hs6M1-13			FL
207	OR2In	H38g05 5				+	yes	FL
208	OR11HnP	H38g05 6						FL
209	OR7EnP	H38g05 7				+		
210	OR9In	H38g05 8					yes	FL
211	OR2AFnP	H38g05 9						FL
212	OR13KnP	H38g06 1						FL
213	OR13Cn	H38g06 2					yes	FL
214	OR13Fn	H38g06 3					yes	FL
215	OR9Qn	H38g06 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
216	OR2TnP	H38g06 5						FL
217	OR4Kn	H38g06 6					yes	FL
218	OR2B8P	H38g06 7			dJ313I6.4;hs6M1-29P		yes	FL
219	OR2Tn	H38g06 8					yes	FL
220	OR4Kn	H38g06 9					yes	FL
221	OR2A4	H38g07 0			WUGSC:H_DJ0988G15.2	+	yes	FL
222	OR7EnP	H38g07 1						FL
223	OR4Kn	H38g07 2					yes	FL
224	OR13InP	H38g07 3						FL
225	OR7EnP	H38g07 4						FL
226	OR6Jn	H38g07 5					yes	FL
227	OR4Mn	H38g07 6					yes	FL
228	OR4VnP	H38g07 7						FL
229	OR6Xn	H38g07 8					yes	FL
230	OR51Gn	H38g07 9					yes	FL
231	OR6EnP	H38g08 0						FL
232	OR4NnP	H38g08 1						FL
233	OR6MnP	H38g08 2						FL
234	OR4Nn	H38g08 3					yes	FL
235	OR4Cn	H38g08 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
236	OR4KnP	H38g085						FL
237	ORnP	H38g086						
238	OR5D3	H38g087		OST908	OR11-8b;OR11-8c			
239	OR2G1P	H38g088	DS13;DS16	OST619	dJ974I11.4;hs6M1-25	+		FL
240	OR4Kn	H38g089					yes	FL
241	OR8BnP	H38g090						FL
242	OR2B2	H38g091			OR6-1;dJ193B12.4		yes	FL
243	OR7EnP	H38g092						FL
244	OR4KnP	H38g093						FL
245	OR2AD1P	H38g094			dJ25J6.1;hs6M1-8P			FL
246	OR1AAnP	H38g095						FL
247	OR1E3P	H38g096			OR17-210			FL
248	OR8BnP	H38g097						FL
249	OR5Hn	H38g098					yes	FL
250	OR1G1	H38g099		OST909	OR17-130;OR17-209	+	yes	FL
251	OR5HnP	H38g100						FL
252	ORnP	H38g101						
253	ORnP	H38g102						
254	OR4PnP	H38g103						FL
255	OR13Hn	H38g104					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
256	OR7D1P	H38g10 5		OST910	CIT-B-440L2;OR19- 131;OR19-A			FL
257	OR4KnP	H38g10 6						FL
258	OR7E24	H38g10 7		OST911	CIT-B-440L2;OR19-8	+		FL
259	OR51NnP	H38g10 8						FL
260	OR7E18P	H38g10 9		OST912	OR19-14;TPCR26	+		FL
261	OR7E19P	H38g11 0		OST913	HSCIT-B-440L2;OR19- 7;TPCR110	+		FL
262	OR7E41P	H38g11 1		OST914	OR11-20;hg84			FL
263	OR2R1	H38g11 2		OST058				FL
264	OR10ACn P	H38g11 3						FL
265	OR51Ln	H38g11 4					yes	FL
266	OR52JnP	H38g11 5						FL
267	OR9LnP	H38g11 6						
268	OR51PnP	H38g11 7						FL
269	OR5HnP	H38g11 8						FL
270	OR51An	H38g11 9					yes	FL
271	OR5HnP	H38g12 0						FL
272	ORnP	H38g12 1						
273	OR52En	H38g12 2					yes	FL
274	OR5Hn	H38g12 3					yes	FL
275	OR4CnP	H38g12 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
276	OR52En	H38g12 5					yes	FL
277	OR10Dn	H38g12 6					yes	FL
278	OR5HnP	H38g12 7						FL
279	OR13An	H38g12 8					yes	FL
280	OR5HnP	H38g12 9						FL
281	OR5Kn	H38g13 0					yes	FL
282	OR7EnP	H38g13 1						FL
283	OR4DnP	H38g13 2						FL
284	OR2ARnP	H38g13 3						
285	OR7E29P	H38g13 4		OST032				FL
286	OR4CnP	H38g13 5						FL
287	OR5PnP	H38g13 6						FL
288	OR7EnP	H38g13 7						FL
289	OR56An	H38g13 8					yes	FL
290	OR56AnP	H38g13 9						
291	OR5Pn	H38g14 0					yes	FL
292	OR7E53P	H38g14 1		OST915	OR3-142;OR3-143			FL
293	OR5Pn	H38g14 2					yes	FL
294	OR52Ln	H38g14 3					yes	FL
295	OR5E1	H38g14 4			HSTPCR24	+		FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
296	OR56AnP	H38g14 5						
297	OR4KnP	H38g14 6						
298	OR52Ln	H38g14 7					yes	FL
299	OR7EnP	H38g14 8						
300	OR52XnP	H38g14 9						FL
301	ORnP	H38g15 0						
302	OR56An	H38g15 1					yes	FL
303	OR56AnP	H38g15 2						
304	OR1R1P	H38g15 3			OR17-1			FL
305	OR52EnP	H38g15 4						FL
306	OR51AnP	H38g15 5						FL
307	OR51An	H38g15 6					yes	FL
308	OR4CnP	H38g15 7						FL
309	OR52JnP	H38g15 8						FL
310	OR4RnP	H38g15 9						
311	OR52Jn	H38g16 0					yes	FL
312	OR4CnP	H38g16 1						FL
313	OR51AnP	H38g16 2						FL
314	OR7EnP	H38g16 3						FL
315	OR5MnP	H38g16 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
316	OR10ABn P	H38g16 5						FL
317	OR52SnP	H38g16 6						FL
318	OR5Mn	H38g16 7					yes	FL
319	OR10Sn	H38g16 8					yes	FL
320	OR5MnP	H38g16 9						FL
321	OR10Gn	H38g17 0					yes	FL
322	ORnP	H38g17 1						FL
323	OR5MnP	H38g17 2						FL
324	OR10GnP	H38g17 3						
325	OR10TnP	H38g17 4						FL
326	ORnP	H38g17 5						
327	OR10RnP	H38g17 6						FL
328	OR5MnP	H38g17 7						FL
329	OR7EnP	H38g17 8						FL
330	OR10Tn	H38g17 9					yes	FL
331	OR1E1	H38g18 0	DS37;D S43;DS 46	OST916	HGMP07I;OR17-2;OR17- 32	+	yes	FL
332	OR5BKnP	H38g18 1						
333	OR5MnP	H38g18 2						FL
334	OR3A3	H38g18 3		OST917	OR17-137;OR17- 16;OR17-201	+	yes	FL
335	OR10ADn P	H38g18 4	DS10			+		FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
336	OR10Rn	H38g18 5				+	yes	FL
337	OR5TnP	H38g18 6						FL
338	OR4GnP	H38g18 7						FL
339	OR6Yn	H38g18 8					yes	FL
340	OR1E2	H38g18 9		OST918	OR17-135;OR17-93	+	yes	FL
341	OR8Hn	H38g19 0					yes	FL
342	OR4Fn	H38g19 1					yes	FL
343	OR10Kn	H38g19 2					yes	FL
344	OR7LnP	H38g19 3						
345	OR8InP	H38g19 4						FL
346	OR10RnP	H38g19 5						
347	OR2AFnP	H38g19 6						FL
348	OR8Kn	H38g19 7					yes	FL
349	ORnP	H38g19 8						
350	OR8KnP	H38g19 9						FL
351	OR51Hn	H38g20 0					yes	FL
352	OR7EnP	H38g20 1						FL
353	ORnP	H38g20 2						
354	OR5BMnP	H38g20 3						FL
355	OR10GnP	H38g20 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
356	OR2Yn	H38g20 5					yes	FL
357	OR10DnP	H38g20 6						FL
358	OR3BnP	H38g20 7						FL
359	OR8Dn	H38g20 8					yes	FL
360	OR5RnP	H38g20 9						
361	OR10Gn	H38g21 0					yes	FL
362	OR5BDnP	H38g21 1						FL
363	OR5ALnP	H38g21 2						FL
364	OR52HnP	H38g21 3						
365	OR10Gn	H38g21 4					yes	FL
366	OR5Mn	H38g21 5					yes	FL
367	OR51Mn	H38g21 6					yes	FL
368	OR6Tn	H38g21 7	DS15;D S146;D S147			+	yes	FL
369	OR6DnP	H38g21 8						FL
370	OR4B1	H38g21 9		OST208			yes	FL
371	OR5ALnP	H38g22 0						FL
372	OR51Qn	H38g22 1					yes	FL
373	OR4Dn	H38g22 2					yes	FL
374	OR52Nn	H38g22 3					yes	FL
375	OR4Xn	H38g22 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
376	OR8Jn	H38g22 5					yes	FL
377	OR51JnP	H38g22 6						FL
378	OR10Gn	H38g22 7					yes	FL
379	OR52En	H38g22 8					yes	FL
380	OR4Xn	H38g22 9					yes	FL
381	OR10A2	H38g23 0	DS5;DS 53;DS5 6	OST363		+		FL
382	OR5Mn	H38g23 1					yes	FL
383	OR52En	H38g23 2					yes	FL
384	OR8Kn	H38g23 3					yes	FL
385	OR10An	H38g23 4	DS55			+	yes	FL
386	OR8LnP	H38g23 5						FL
387	OR5BPnP	H38g23 6						
388	OR52Nn	H38g23 7					yes	FL
389	ORnP	H38g23 8						
390	OR8JnP	H38g23 9						FL
391	OR5Mn	H38g24 0					yes	FL
392	OR52En	H38g24 1					yes	FL
393	OR5Tn	H38g24 2					yes	FL
394	OR52NnP	H38g24 3						FL
395	OR4B2P	H38g24 4		OST919	hg449			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
396	OR51KnP	H38g24 5						FL
397	OR52QnP	H38g24 6						FL
398	OR4Fn	H38g24 7					yes	FL
399	OR11MnP	H38g24 8						
400	OR52Nn	H38g24 9					yes	FL
401	OR56An	H38g25 0					yes	FL
402	OR5AWnP	H38g25 1						FL
403	OR52Nn	H38g25 2					yes	FL
404	ORnP	H38g25 3						
405	OR52EnP	H38g25 4						FL
406	OR5BHnP	H38g25 5						FL
407	OR4QnP	H38g25 6						FL
408	OR51En	H38g25 7					yes	FL
409	OR11KnP	H38g25 8						FL
410	OR12D1P	H38g25 9			AC004174- B;dJ994E9.7;hs6M1-19			FL
411	OR4NnP	H38g26 0				+		FL
412	OR11A1	H38g26 1			AC004174- A;dJ994E9.6;hs6M1-18	+	yes	FL
413	OR10C1	H38g26 2			AC004174;dJ994E9.5;h s6M1-17	+	yes	FL
414	OR2H1	H38g26 3	DS114		OLFR42A-9004-14;OR6- 2;dJ994E9.4;hs6M1-16	+	yes	FL
415	OR9RnP	H38g26 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
416	OR4FnP	H38g26 5						
417	OR7D4	H38g26 6		OST920	OR19-B;hg105			FL
418	OR7E25P	H38g26 7		OST921	CIT-B-440L2;OR19-C			FL
419	OR2D2	H38g26 8			OR11-610		yes	FL
420	OR10An	H38g26 9					yes	FL
421	OR2WnP	H38g27 0				+		
422	OR7E16P	H38g27 1		OST922	CIT-B-440L2;OR19- 133;OR19-9			FL
423	OR52Pn	H38g27 2					yes	FL
424	OR6AnP	H38g27 3						FL
425	OR7D2	H38g27 4	DS70;D S73	OST923	HTPCRHO3;OR19-4	+	yes	FL
426	OR52UnP	H38g27 5						FL
427	OR2AGn	H38g27 6					yes	FL
428	OR7G3	H38g27 7		OST085			yes	FL
429	OR56BnP	H38g27 8						FL
430	OR2AGnP	H38g27 9						FL
431	OR56Bn	H38g28 0					yes	FL
432	OR6AnP	H38g28 1						FL
433	OR4FnP	H38g28 2						FL
434	OR6Wn	H38g28 3					yes	FL
435	OR4Mn	H38g28 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
436	OR52YnP	H38g28 5						
437	OR11HnP	H38g28 6						FL
438	OR9An	H38g28 7					yes	FL
439	OR5Mn	H38g28 8					yes	FL
440	OR6Vn	H38g28 9					yes	FL
441	OR4Nn	H38g29 0				+	yes	FL
442	OR51AnP	H38g29 1						FL
443	OR9PnP	H38g29 2						
444	OR4H6P	H38g29 3			OR15-71;OR15-82			FL
445	OR51FnP	H38g29 4						FL
446	OR7E1P	H38g29 5			AC004923			FL
447	OR51Tn	H38g29 6					yes	FL
448	OR2Vn	H38g29 7					yes	FL
449	OR51HnP	H38g29 8						FL
450	OR51An	H38g29 9					yes	FL
451	OR2AInP	H38g30 0						FL
452	OR2F2	H38g30 1			OR7- 1;WUGSC:H_DJ0669B10. 1		yes	FL
453	OR1F12	H38g30 2			dJ31316.5;hs6M1-35P		yes	FL
454	OR7G1P	H38g30 3			OR19-15		yes	FL
455	OR7G2	H38g30 4		OST260			yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
456	OR1M1	H38g30 5		OST924	OR19-6		yes	FL
457	OR51UnP	H38g30 6						
458	OR52Hn	H38g30 7					yes	FL
459	OR1F1	H38g30 8		OST925	OLFMP; OR16-36; OR16- 37; OR16-88; OR16- 89; OR16-90	+	yes	FL
460	OR10PnP	H38g30 9						
461	OR4FnP	H38g31 0						FL
462	OR2T1	H38g31 1			OR1-25		yes	FL
463	OR7EnP	H38g31 2						FL
464	OR51Gn	H38g31 3					yes	FL
465	OR2Tn	H38g31 4					yes	FL
466	OR5BGnP	H38g31 5						
467	OR5WnP	H38g31 6						FL
468	OR51Sn	H38g31 7					yes	FL
469	OR5WnP	H38g31 8						
470	OR51AnP	H38g31 9						FL
471	OR5Dn	H38g32 0					yes	FL
472	OR7EnP	H38g32 1						FL
473	OR51Fn	H38g32 2					yes	FL
474	OR5Dn	H38g32 3					yes	FL
475	OR52Rn	H38g32 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
476	ORnP	H38g32 5						FL
477	OR7EnP	H38g32 6						FL
478	OR6Qn	H38g32 7					yes	FL
479	OR4Fn	H38g32 8					yes	FL
480	OR7EnP	H38g32 9						
481	OR7En	H38g33 0					yes	FL
482	OR4Nn	H38g33 1					yes	FL
483	OR2ASnP	H38g33 2						
484	OR11Hn	H38g33 3					yes	FL
485	OR2Tn	H38g33 4					yes	FL
486	OR2TnP	H38g33 5						
487	OR2AKnP	H38g33 6						FL
488	ORnP	H38g33 7						
489	OR5DnP	H38g33 8						FL
490	OR7EnP	H38g33 9						
491	OR5L2	H38g34 0			HSHTPCR16	+	yes	FL
492	OR5Dn	H38g34 1					yes	FL
493	ORnP	H38g34 2						
494	OR10Qn	H38g34 3					yes	FL
495	OR9MnP	H38g34 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
496	OR7E62P	H38g34 5		OST926	OR2-4;OR2-52;OR2- 53;OR2-75			FL
497	OR9LnP	H38g34 6						FL
498	OR7E46P	H38g34 7		OST379				FL
499	OR1S1	H38g34 8		OST034			yes	FL
500	OR5DnP	H38g34 9						
501	OR9InP	H38g35 0						FL
502	OR5Dn	H38g35 1					yes	FL
503	OR9QnP	H38g35 2						FL
504	OR51CnP	H38g35 3						
505	OR5WnP	H38g35 4						
506	OR9InP	H38g35 5						FL
507	OR51AnP	H38g35 6						FL
508	OR5L1	H38g35 7		OST262			yes	FL
509	OR7EnP	H38g35 8				+		
510	OR5BLnP	H38g35 9						
511	OR51En	H38g36 0					yes	FL
512	OR51Dn	H38g36 1					yes	FL
513	OR52In	H38g36 2					yes	FL
514	OR4KnP	H38g36 3	DS67			+		FL
515	OR52In	H38g36 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
516	OR4KnP	H38g36 5						FL
517	OR52MnP	H38g36 6						FL
518	ORnP	H38g36 7						
519	ORnP	H38g36 8						
520	ORnP	H38g36 9						FL
521	ORnP	H38g37 0						
522	ORnP	H38g37 1						
523	ORnP	H38g37 2						
524	ORnP	H38g37 3						
525	ORnP	H38g37 4						
526	OR6Pn	H38g37 5					yes	FL
527	OR7EnP	H38g37 6						FL
528	ORnP	H38g37 7						
529	OR7EnP	H38g37 8						FL
530	ORnP	H38g37 9						
531	OR10XnP	H38g38 0						FL
532	OR10Zn	H38g38 1					yes	FL
533	OR6KnP	H38g38 2						FL
534	OR6Kn	H38g38 3					yes	FL
535	OR1FnP	H38g38 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
536	OR1ABnP	H38g38 5						
537	OR52MnP	H38g38 6						FL
538	OR1XnP	H38g38 7						FL
539	OR4FnP	H38g38 8						
540	OR52MnP	H38g38 9						FL
541	OR2Vn	H38g39 0					yes	FL
542	OR2V1P	H38g39 1		OST265				FL
543	OR2Zn	H38g39 2					yes	FL
544	OR52KnP	H38g39 3				+		
545	OR10Hn	H38g39 4					yes	FL
546	OR2Dn	H38g39 5					yes	FL
547	OR7EnP	H38g39 6						
548	OR11GnP	H38g39 7						FL
549	ORnP	H38g39 8						
550	OR11Gn	H38g39 9					yes	FL
551	OR11HnP	H38g40 0						FL
552	OR6Kn	H38g40 1					yes	FL
553	OR11Hn	H38g40 2					yes	FL
554	OR6KnP	H38g40 3						
555	OR11HnP	H38g40 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
556	OR6KnP	H38g405						FL
557	OR6Kn	H38g406					yes	FL
558	OR2Ln	H38g407					yes	FL
559	OR4GnP	H38g408						
560	OR6Nn	H38g409					yes	FL
561	OR2LnP	H38g410						
562	OR9A1	H38g411			HSHTPCR06			
563	OR6Nn	H38g412					yes	FL
564	OR10Hn	H38g413					yes	FL
565	OR7EnP	H38g414						FL
566	OR2AQnP	H38g415						
567	OR2LnP	H38g416						FL
568	OR5ARn	H38g417					yes	FL
569	OR7EnP	H38g418						FL
570	OR10AAnP	H38g419						FL
571	OR10JnP	H38g420						FL
572	OR5A1P	H38g421	DS69;DS71;DS128;DS129	OST181		+	yes	FL
573	OR2AHnP	H38g422						FL
574	OR10JnP	H38g423						FL
575	OR56BnP	H38g42						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
576	OR5M1	H38g42 5		OST050			yes	FL
577	OR52WnP	H38g42 6						
578	OR5AMnP	H38g42 7						FL
579	OR52BnP	H38g42 8						FL
580	OR5MnP	H38g42 9						FL
581	OR5APnP	H38g43 0						FL
582	OR56Bn	H38g43 1					yes	FL
583	OR5APn	H38g43 2					yes	FL
584	OR52Bn	H38g43 3					yes	FL
585	OR9Gn	H38g43 4					yes	FL
586	OR52Kn	H38g43 5					yes	FL
587	OR5MnP	H38g43 6						FL
588	OR52Kn	H38g43 7					yes	FL
589	OR52KnP	H38g43 8				+		FL
590	OR52BnP	H38g43 9						FL
591	OR2B6P	H38g44 0			OR6-31		yes	FL
592	OR2WnP	H38g44 1						FL
593	OR2AnP	H38g44 2						FL
594	ORnP	H38g44 3						
595	OR2LnP	H38g44 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
596	OR2W2P	H38g44 5	DS148		dJ313I6.2;hs6M1-30P	+		FL
597	OR2LnP	H38g44 6						
598	OR2B7P	H38g44 7			dJ313I6.3;hs6M1-31P			FL
599	OR2Ln	H38g44 8					yes	FL
600	OR5BFn	H38g44 9					yes	FL
601	OR2LnP	H38g45 0						FL
602	OR7EnP	H38g45 1						
603	OR1H1	H38g45 2	DS122	OST26		+		FL
604	ORnP	H38g45 3						
605	OR4Dn	H38g45 4					yes	FL
606	OR1Ln	H38g45 5					yes	FL
607	OR5AXn	H38g45 6					yes	FL
608	OR5An	H38g45 7					yes	FL
609	OR5AYn	H38g45 8					yes	FL
610	OR13Gn	H38g45 9					yes	FL
611	OR5BBnP	H38g46 0						
612	OR9GnP	H38g46 1						FL
613	OR2TnP	H38g46 2						FL
614	ORnP	H38g46 3						FL
615	OR1Jn	H38g46 4				+	yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
616	OR2CnP	H38g46 5						FL
617	OR9GnP	H38g46 6						FL
618	OR2C1	H38g46 7			OLFmf3	+	yes	FL
619	OR51AnP	H38g46 8						
620	OR9Gn	H38g46 9					yes	FL
621	OR52Bn	H38g47 0					yes	FL
622	OR1K1	H38g47 1			hg99		yes	FL
623	OR51RnP	H38g47 2						FL
624	OR7EnP	H38g47 3						FL
625	OR52PnP	H38g47 4						FL
626	OR7EnP	H38g47 5						FL
627	OR7EnP	H38g47 6						
628	OR4KnP	H38g47 7	DS66		OR21-1	+		FL
629	OR4KnP	H38g47 8			OR21-2			FL
630	OR7EnP	H38g47 9						
631	OR51In	H38g48 0					yes	FL
632	OR51In	H38g48 1					yes	FL
633	OR2AnP	H38g48 2						
634	OR2A2	H38g48 3		OST008				FL
635	OR2AnP	H38g48 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
636	OR2Gn	H38g485					yes	FL
637	OR2AnP	H38g486						
638	OR6Fn	H38g487	DS20;D S21;DS 23;DS2 7;DS28 ;DS39; DS40;D S113;D S126;D S135;D S137;D S138;D S139;D S140;D S141;D S145			+	yes	FL
639	OR2AnP	H38g488						
640	OR2Gn	H38g489					yes	FL
641	OR7E37P	H38g490			hg533	+		FL
642	OR5AVn	H38g491	DS4;DS 6;DS11			+	yes	FL
643	OR2AJnP	H38g492						FL
644	OR13EnP	H38g493						FL
645	OR2Cn	H38g494					yes	FL
646	OR2TnP	H38g495						
647	OR2WnP	H38g496						
648	OR13Jn	H38g497					yes	FL
649	OR6RnP	H38g498						FL
650	OR5ATn	H38g499					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
651	OR2Zn	H38g50 0					yes	FL
652	OR4Ln	H38g50 1					yes	FL
653	OR4UnP	H38g50 2						FL
654	OR4Fn	H38g50 3					yes	FL
655	OR4FnP	H38g50 4						FL
656	OR4Fn	H38g50 5					yes	FL
657	OR4Fn	H38g50 6					yes	FL
658	OR4AnP	H38g50 7						FL
659	OR4LnP	H38g50 8						FL
660	OR7E33P	H38g50 9		OST927	hg688			FL
661	OR2Cn	H38g51 0					yes	FL
662	OR4Kn	H38g51 1					yes	FL
663	OR5U1	H38g51 2			bA150A6.4;hs6M1-28		yes	FL
664	OR4Kn	H38g51 3					yes	FL
665	OR5V1	H38g51 4			bA150A6.2;hs6M1-21		yes	FL
666	OR4QnP	H38g51 5						FL
667	OR12D3	H38g51 6			bA150A6.1;hs6M1-27		yes	FL
668	OR4Kn	H38g51 7					yes	FL
669	OR51CnP	H38g51 8						
670	OR1J2	H38g51 9		OST044	hg152		yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
671	OR5BJnP	H38g52 0						
672	OR1J1	H38g52 1	DS130	OST928	hg32	+	yes	FL
673	OR13En	H38g52 2					put	
674	OR4KnP	H38g52 3	DS1			+		FL
675	OR1LnP	H38g52 4						
676	OR2CnP	H38g52 5						
677	OR4TnP	H38g52 6						FL
678	OR5BnP	H38g52 7						
679	OR4Kn	H38g52 8					yes	FL
680	OR11Ln	H38g52 9					yes	FL
681	OR7E68P	H38g53 0		OST929	OR912-108;OR912- 109;OR912-110;OR912- 46;hg523;hg674			FL
682	OR7EnP	H38g53 1						FL
683	OR7E31P	H38g53 2		OST016;O ST205				FL
684	OR7EnP	H38g53 3						FL
685	OR5AKnP	H38g53 4						FL
686	OR5AKn	H38g53 5					yes	FL
687	OR5AKn	H38g53 6					yes	FL
688	OR5BQnP	H38g53 7						
689	OR1Nn	H38g53 8	DS136; DS142			+	yes	FL
690	OR1J4	H38g53 9		OST930	HSHTPCR01	+	yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
691	OR1Nn	H38g54 0					yes	FL
692	OR2AnP	H38g54 1						FL
693	OR2ANnP	H38g54 2						
694	OR5K1	H38g54 3			HSHTPCR10	+	yes	FL
695	OR2K2	H38g54 4			HSHTPCR06		yes	FL
696	OR8Hn	H38g54 5					yes	FL
697	ORnP	H38g54 6						
698	OR4AnP	H38g54 7						
699	OR4An	H38g54 8					yes	FL
700	OR6Sn	H38g54 9					yes	FL
701	OR4RnP	H38g55 0						
702	OR13Cn	H38g55 1					yes	FL
703	OR13DnP	H38g55 2						FL
704	OR7EnP	H38g55 3						FL
705	OR10PnP	H38g55 4						FL
706	OR8In	H38g55 5					yes	FL
707	OR8G1	H38g55 6			HSTPCR25	+	put	
708	ORnP	H38g55 7						
709	OR5F1	H38g55 8			OR11-10		yes	FL
710	OR5FnP	H38g55 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
711	OR6BnP	H38g56 0						FL
712	OR2D1	H38g56 1			hg27		put	
713	OR5ASn	H38g56 2					yes	FL
714	OR5SnP	H38g56 3						FL
715	OR5AQnP	H38g56 4						
716	OR6BnP	H38g56 5						FL
717	OR5JnP	H38g56 6						FL
718	OR9AnP	H38g56 7						FL
719	OR5BEnP	H38g56 8						FL
720	OR9An	H38g56 9					yes	FL
721	OR8Hn	H38g57 0					yes	FL
722	OR5BNnP	H38g57 1						
723	OR8Jn	H38g57 2					yes	FL
724	OR9NnP	H38g57 3						
725	OR7EnP	H38g57 4						FL
726	OR7E9P	H38g57 5		OST289				FL
727	OR8KnP	H38g57 6						
728	OR2AnP	H38g57 7						
729	OR8Kn	H38g57 8					yes	FL
730	OR7E39P	H38g57 9		OST931	hg611			

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
731	OR7E27P	H38g58 0		OST932	hg616			
732	OR2Hn	H38g58 1					put	
733	OR13CnP	H38g58 2						FL
734	OR13Cn	H38g58 3					yes	FL
735	OR2S1P	H38g58 4		OST611				FL
736	OR2AMnP	H38g58 5						
737	OR1N1	H38g58 6		OST933	OR1-26		put	
738	OR2S2	H38g58 7		OST715			yes	FL
739	OR7E26P	H38g58 8			OR1-51; OR1-72; OR1-73; OR912-95			
740	OR1F11	H38g58 9			hg91		put	
741	OR5ACnP	H38g59 0						FL
742	OR5B10P	H38g59 1			OR13-34; OR13-64; OR13-67			
743	OR2AnP	H38g59 2						FL
744	OR1E5	H38g59 3	DS117; DS143		OR13-66	+	put	
745	OR4Fn	H38g59 4					yes	FL
746	OR5CnP	H38g59 5						
747	OR2WnP	H38g59 6						
748	OR2L2	H38g59 7			HSHTPCRHO7	+	put	
749	OR4H8P	H38g59 8			OR14-58			
750	OR5D10P	H38g59 9			OR912-94			

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
751	OR7A12P	H38g60 0			OR14-11;OR14-59			
752	OR2L1	H38g60 1			HSHTPCR02	+	put	
753	OR2F3P	H38g60 2			OR14-60		put	
754	OR4H10P	H38g60 3		OST934	OR15-69;OR15- 80;OR15-81			
755	OR5H1	H38g60 4			HSHTPCR14	+	put	
756	OR2K1	H38g60 5			HSHTPCR17	+	put	
757	OR7E11P	H38g60 6			OR11-2			
758	OR7A3P	H38g60 7		OST935	OR11-7b			
759	OR6A1	H38g60 8			OR11-55	+	yes	FL
760	OR5I1	H38g60 9			OLF1	+	yes	FL
761	OR2H3	H38g61 0			HUMORLMHC	+	yes	FL
762	OR10J1	H38g61 1	DS3;DS 14		HSHGMP07J	+	yes	FL
763	OR7E3P	H38g61 2			OR11-9			
764	OR1D6P	H38g61 3			OR11-13;OR11-22			
765	OR5D10P	H38g61 4			OR18-17;OR18- 42;OR18-43;OR18-44			
766	OR5D5P	H38g61 5			OR18-79;OR912-47			
767	OR52A1	H38g61 6			HPFH1OR	+	yes	FL
768	OR2AEn	H38g61 7					yes	FL
769	OR6LnP	H38g61 8						FL
770	OR6LnP	H38g61 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
771	OR7MnP	H38g62 0						
772	OR13Cn	H38g62 1					yes	FL
773	OR13Cn	H38g62 2					yes	FL
774	OR2InP	H38g62 3				+		
775	OR4An	H38g62 4					yes	FL
776	OR2InP	H38g62 5				+		
777	OR4AnP	H38g62 6						FL
778	OR4AnP	H38g62 7						FL
779	OR8C1P	H38g62 8			OR11-175			
780	OR4AnP	H38g62 9						FL
781	OR7E15P	H38g63 0			OR11-392			
782	OR10A1	H38g63 2			OR11-403		put	
783	OR2An	H38g63 3				+	put	
784	OR7EnP	H38g63 4				+		FL
785	OR7En	H38g63 5				+	put	
786	OR51A1P	H38g63 6			HPFH6OR	+		FL
787	OR7E47P	H38g63 7			HSORBPL41;bpl41-16	+		FL
788	OR5B5P	H38g63 8			OR3-144;OR912-92			
789	OR1F10	H38g63 9			OR3-145		put	
790	OR8G2	H38g64 0			HSTPCR120	+	put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
791	OR1Sn	H38g64 1					yes	FL
792	OR4AnP	H38g64 2						FL
793	OR4AnP	H38g64 3						FL
794	OR4AnP	H38g64 4						FL
795	OR4AnP	H38g64 5						FL
796	OR4AnP	H38g64 6						FL
797	OR4AnP	H38g64 7						FL
798	OR4An	H38g64 8					yes	FL
799	OR4An	H38g64 9					yes	FL
800	OR7E42P	H38g65 0		OST001				
801	OR2M3P	H38g65 1		OST003				
802	OR4H11P	H38g65 2			OR4-114;OR4-115;OR4-119			
803	OR7E57P	H38g65 3		OST007				
804	OR2B1P	H38g65 4			OR5-40;OR5-41		put	
805	OR7E34P	H38g65 5		OST011				
806	OR7E56P	H38g65 6		OST013				
807	OR3AnP	H38g65 7						
808	OR4H5P	H38g65 8			OR5-39;OR5-84			
809	OR1En	H38g65 9	DS47;D S115;D S120;D S121;D S123;D			+	put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
			S125					
810	OR51CnP	H38g66 0						
811	OR2WnP	H38g66 1						FL
812	OR51B1P	H38g66 2			AF149710			FL
813	OR7E91P	H38g66 3		OST021				
814	OR7E44P	H38g66 4		OST022				
815	OR5B7P	H38g66 5			OR6-55; OR6-57			
816	OR7E36P	H38g66 6		OST024				
817	OR2A5	H38g66 7			OR7-138; OR7-141		put	
818	OR5B1P	H38g66 8		OST936	OR8-122; OR8-123			
819	OR8B8	H38g66 9			HSTPCR85	+	yes	FL
820	OR8B4P	H38g67 0			AC002556-D		yes	FL
821	ORnP	H38g67 1						FL
822	OR8B3	H38g67 2			AC002556-B		yes	FL
823	OR2Bn	H38g67 3					yes	FL
824	OR8B6P	H38g67 4			AC002556-G			FL
825	OR8B5P	H38g67 5			AC002556-A			FL
826	OR4E2	H38g67 6			AE000658-A		yes	FL
827	OR8B7P	H38g67 7			AC002556-F			FL
828	OR11JnP	H38g67 8						FL
829	OR4E1P	H38g67 9			AE000658			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
830	OR10DnP	H38g68 0						
831	ORnP	H38g68 1						
832	OR8D2	H38g68 2			AC002556-E		yes	FL
833	OR11InP	H38g68 3						FL
834	OR11JnP	H38g68 4						FL
835	OR10AnP	H38g68 5	DS12;D S65			+		FL
836	OR8C3P	H38g68 6			OR912-106;OR912- 45;pDJ9j14			FL
837	OR2DnP	H38g68 7						FL
838	OR4PnP	H38g68 8						
839	OR7E21P	H38g68 9		OST035	OR4DG			
840	OR2M1	H38g69 0		OST037			put	
841	OR7AnP	H38g69 1						
842	OR5D11P	H38g69 2			OR8-125;OR8-127			
843	OR7E50P	H38g69 3			OR8-126			
844	OR7E45P	H38g69 4		OST049				
845	OR7E77P	H38g69 5		OST060				
846	OR8B2	H38g69 6			AC002556-C		yes	FL
847	OR8D1	H38g69 7		OST004	pDJ9j14		yes	FL
848	OR8B1P	H38g69 8		OST937	OR11-561			FL
849	OR7A1P	H38g69 9		OST938	OLF4p;OR19-3;hg513			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
850	OR7E8P	H38g70 0			OR11-11a;pDJ392a17			FL
851	OR4DnP	H38g70 1						FL
852	OR7E80P	H38g70 2		OST939	pDJ392a17			FL
853	OR4DnP	H38g70 3						FL
854	OR7E10P	H38g70 4			AC000385-A			FL
855	OR10B1P	H38g70 5			AC003956-A;OR19-19			FL
856	OR2InP	H38g70 6				+		
857	OR4Dn	H38g70 7					yes	FL
858	OR5ACn	H38g70 8					put	
859	OR2I1	H38g70 9			AC004179- A;dJ271M21.7;hs6M1- 14	+		
860	OR10H1	H38g71 0			AC004510	+	yes	FL
861	OR7E59P	H38g71 1		OST119				
862	OR7E28P	H38g71 2		OST128				
863	OR5B3	H38g71 3		OST129			put	
864	OR2A6	H38g71 4		OST182			put	
865	OR6Cn	H38g71 5					put	
866	OR7E54P	H38g71 6		OST185				
867	OR7E48P	H38g71 7		OST193				
868	OR67AnP	H38g71 8						FL
869	OR4DnP	H38g71 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
870	OR4CnP	H38g72 0						FL
871	OR4DnP	H38g72 1						FL
872	OR10H2	H38g72 2			AC004597-A	+	yes	FL
873	OR10H3	H38g72 3			AC004597-B	+	yes	FL
874	OR55CnP	H38g72 4						
875	OR55BnP	H38g72 5						
876	OR52VnP	H38g72 6						FL
877	OR2B3	H38g72 7			OR6- 4;dJ80I19.1;hs6M1-1		yes	FL
878	OR52TnP	H38g72 8						FL
879	OR2J1P	H38g72 9			OR6- 5;dJ80I19.2;hs6M1-4			FL
880	OR52HnP	H38g73 0						FL
881	OR2J3	H38g73 1			OR6- 6;dJ80I19.7;hs6M1-3		yes	FL
882	OR52An	H38g73 2				+	put	
883	OR4Qn	H38g73 3					put	
884	OR52BnP	H38g73 4						FL
885	OR2N1P	H38g73 5	DS9		OR6- 7;dJ80I19.3;hs6M1-2	+		FL
886	OR51EnP	H38g73 6				+		
887	OR2J2	H38g73 7			OR6- 8;dJ80I19.4;hs6M1-6		yes	FL
888	OR2In	H38g73 8				+	put	
889	OR2J4P	H38g73 9			OR6- 9;dJ80I19.5;hs6M1-5			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
890	OR7E40P	H38g74 0		OST215				
891	OR2H4P	H38g74 1			OR6- 3;dJ80I19.6;hs6M1-7			FL
892	OR7E52P	H38g74 2		OST245				
893	OR2InP	H38g74 3				+		
894	OR6C1	H38g74 4		OST267			put	
895	OR7E30P	H38g74 5		OST339				
896	OR5BAnP	H38g74 6	DS132			+		
897	OR7H1P	H38g74 7		OST940	CIT-B-440L2			FL
898	OR5B2	H38g74 8		OST073			yes	FL
899	OR5AZnP	H38g74 9						FL
900	OR5Bn	H38g75 0					yes	FL
901	OR52Bn	H38g75 1					yes	FL
902	OR5BnP	H38g75 2						FL
903	OR52Dn	H38g75 3					yes	FL
904	OR7A11	H38g75 4		OST527	CIT-HSP-87m17			FL
905	OR5BnP	H38g75 5						FL
906	OR51AnP	H38g75 6						FL
907	OR7A15P	H38g75 7		OST941	CIT-HSP-87m17;OR19- 1;OR19-134;OR19-146			FL
908	OR7C2	H38g75 8			CIT-HSP-87m17;OR19- 18		yes	FL
909	OR7E23P	H38g75 9		OST942	OR21-3			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
910	OR2E1	H38g76 0			HS29K1;HSNH0569I24;hs6M1-9			
911	OR1I1	H38g76 1			F20569;OR19-20		yes	FL
912	OR1RnP	H38g76 2						FL
913	OR4F3	H38g76 3			AC004908		yes	FL
914	OR2AEn	H38g76 4					yes	FL
915	OR2InP	H38g76 5				+		
916	OR52AnP	H38g76 6				+		
917	OR7C1	H38g76 7		OST943	CIT-HSP-146e8;OR19-5;TPCR86	+	yes	FL
918	OR2A3P	H38g76 8			AC004889-B			FL
919	OR7A5	H38g76 9	DS8;DS19;DS61;DS68;DS112	OST944	HTPCR2	+	yes	FL
920	OR2InP	H38g77 0	DS72			+		
921	OR7A10	H38g77 1		OST027	CIT-HSP-146e8		yes	FL
922	OR2An	H38g77 2				+	put	
923	OR2M2	H38g77 3		OST423			put	
924	OR7A8P	H38g77 4		OST042	OR19-11;hg83			FL
925	OR2An	H38g77 5				+	put	
926	OR7E20P	H38g77 6		OST516				
927	OR2AnP	H38g77 7				+		
928	OR5BHnP	H38g77 8				+		
929	OR1En	H38g77					put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
930	OR1EnP	H38g78 0						
931	OR5Bn	H38g78 1					yes	FL
932	OR8RnP	H38g78 2						
933	OR5ANn	H38g78 3					yes	FL
934	OR5ANnP	H38g78 4						FL
935	OR5BRnP	H38g78 5						FL
936	OR2A1	H38g78 6			AC004889-A	+	yes	FL
937	OR10An	H38g78 7					yes	FL
938	OR2A9	H38g78 8	DS149		HSDJ0798C17	+		FL
939	OR2A7	H38g78 9			HSDJ0798C17	+	yes	FL
940	OR10A3	H38g79 0			HSHTPCR12	+	yes	FL
941	OR10Cn	H38g79 1					yes	FL
942	OR7A2P	H38g79 2			OLF4p;OR19-18;hg1003		yes	FL
943	OR10WnP	H38g79 3						FL
944	OR7A17	H38g79 4			HSHTPCR19		yes	FL
945	OR5Bn	H38g79 5					yes	FL
946	OR5BnP	H38g79 6						FL
947	OR1Q1	H38g79 7		OST226	HSTPCR106;OR9- A;hRPK-465_F_21	+	yes	FL
948	OR2Hn	H38g79 8	DS133; DS144; DS150			+	yes	FL
949	OR7EnP	H38g79						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
950	OR7A14	H38g800		OST945	OR19-12			
951	OR1B1	H38g801			OR9-B;hRPK-465_F_21		yes	FL
952	OR12D2	H38g802			AC004171;dJ994E9.8;hs6M1-20	+	yes	FL
953	OR7EnP	H38g803						FL
954	OR8BnP	H38g804						FL
955	OR1L1	H38g805			OR9-C;hRPK-465_F_21;hg23		yes	FL
956	OR11An	H38g806					yes	FL
957	OR7AnP	H38g807						
958	OR1C1	H38g808			HSTPCR27	+	yes	FL
959	OR1D2	H38g809		OST946	OR17-4	+	yes	FL
960	OR1L3	H38g810			OR9-D;hRPK-465_F_21		yes	FL
961	OR12DnP	H38g811						FL
962	OR4G1P	H38g812			OLB			FL
963	OR2B4P	H38g813			AL050339-A;dJ974I11.1;hs6M1-22			
964	OR11H1	H38g814			OR22-1		yes	FL
965	OR4Fn	H38g815					yes	FL
966	OR56AnP	H38g816						FL
967	OR8NnP	H38g817						FL
968	OR7EnP	H38g818						
969	OR4Pn	H38g81					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
970	OR6Cn	H38g82 0					put	
971	OR5BCnP	H38g82 1						
972	OR10QnP	H38g82 2	DS64			+		FL
973	OR5BnP	H38g82 3						FL
974	OR10PnP	H38g82 4						FL
975	OR1L4	H38g82 5		OST046	OR9-E;hRPK-465_F_21		yes	FL
976	OR2APnP	H38g82 6						
977	OR1L6	H38g82 7		OST947	HShRPK-465_F_21;hg16		yes	FL
978	OR6UnP	H38g82 8						FL
979	OR5C1	H38g82 9			OR9-F;hRPK-465_F_21		yes	FL
980	OR11InP	H38g83 0						FL
981	OR4AnP	H38g83 1						FL
982	OR4GnP	H38g83 2						FL
983	OR10Vn	H38g83 3					yes	FL
984	OR4G2P	H38g83 4			HS14a-1-B			FL
985	OR10VnP	H38g83 5				+		
986	OR4F4	H38g83 6			HS14a-1-A		yes	FL
987	OR4G3P	H38g83 7			OLC-7501			FL
988	OR5AKnP	H38g83 8						FL
989	OR10YnP	H38g83 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
990	OR4GnP	H38g84 0						FL
991	ORnP	H38g84 1						
992	OR4Fn	H38g84 2					yes	FL
993	OR8A1	H38g84 3		OST025			yes	FL
994	OR8Bn	H38g84 4					yes	FL
995	OR6DnP	H38g84 5						
996	OR7E14P	H38g84 6		OST948	OR11-5	+		FL
997	OR2M4	H38g84 7		OST710	HSHTPCR18	+	put	
998	OR4WnP	H38g84 8						
999	OR4Fn	H38g84 9	DS36			+	yes	FL
1000	OR7EnP	H38g85 0						
1001	OR4GnP	H38g85 1						FL
1002	OR10JnP	H38g85 2						
1003	OR52En	H38g85 3					yes	FL
1004	OR4RnP	H38g85 4						FL
1005	OR4Cn	H38g85 5					yes	FL
1006	OR4AnP	H38g85 6						
1007	OR4AnP	H38g85 7	DS54			+		
1008	OR4AnP	H38g85 8						FL
1009	OR9Gn	H38g85 9					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1010	OR10An	H38g86 0					yes	FL
1011	OR4Cn	H38g86 1					yes	FL
1012	OR10VnP	H38g86 2						
1013	OR10UnP	H38g86 3						FL
1014	OR7E2P	H38g86 4	DS127		OR11-6;hg94	+		FL
1015	OR7E35P	H38g86 5		OST018				FL
1016	OR9KnP	H38g86 6						
1017	OR7E13P	H38g86 7		OST949	OR11-4			FL
1018	OR7EnP	H38g86 8						FL
1019	OR9Kn	H38g86 9					yes	FL
1020	ORnP	H38g87 0						FL
1021	OR7EnP	H38g87 1		OST950	OR11-1;hg500	+		FL
1022	OR7EnP	H38g87 2						FL
1023	OR3A4P	H38g87 3		OST951	OR17-24;OR17-25	+	yes	FL
1024	OR8QnP	H38g87 4						
1025	OR7EnP	H38g87 5						FL
1026	OR7EnP	H38g87 6						FL
1027	OR3A1	H38g87 7	DS2		OLFRA03;OR17- 40;hg138	+	yes	FL
1028	OR5Gn	H38g87 8					yes	FL
1029	OR5MnP	H38g87 9						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1030	OR7EnP	H38g880						FL
1031	OR5G1P	H38g881		OST952	OR11-104;OR93;OR93Hum			FL
1032	OR5PnP	H38g882						FL
1033	OR10AEnP	H38g883						
1034	OR3A2	H38g884		OST953	OR17-228	+	yes	FL
1035	OR10Jn	H38g885					yes	FL
1036	OR1D3P	H38g886		OST954	OR17-23			FL
1037	OR10Jn	H38g887					yes	FL
1038	OR1D4	H38g888			OR17-30	+	yes	FL
1039	OR5GnP	H38g889						FL
1040	OR4SnP	H38g890						FL
1041	OR5GnP	H38g891						FL
1042	OR9HnP	H38g892						FL
1043	OR1A1	H38g893			OR17-7	+	yes	FL
1044	OR1A2	H38g894			OR17-6	+	yes	FL
1045	OR8AnP	H38g895						FL
1046	OR1P1P	H38g896			OR17-208	+		FL
1047	OR7E12P	H38g897		OST955	AC000378-A;OR11-3;hg1058	+		FL
1048	OR4A1P	H38g898			OR11-30			FL
1049	OR10G3	H38g899			AE000658-D		yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1050	OR10G1P	H38g90 0			AE000658-C			FL
1051	OR10G2	H38g90 1			AE000658-B		yes	FL
1052	OR5Tn	H38g90 2					yes	FL
1053	OR7EnP	H38g90 3						FL
1054	OR7EnP	H38g90 4						FL
1055	OR4AnP	H38g90 5						FL
1056	OR4C1	H38g90 6			HSHTPCR11	+		FL
1057	OR1EnP	H38g90 7						
1058	OR7KnP	H38g90 8						FL
1059	OR4CnP	H38g90 9						FL
1060	OR1RnP	H38g91 0						FL
1061	OR5AUn	H38g91 1					yes	FL
1062	OR4Cn	H38g91 2					yes	FL
1063	OR4Cn	H38g91 3					yes	FL
1064	OR13DnP	H38g91 4						FL
1065	OR5n	H38g91 5	DSU116			+		
1066	OR2Hn	H38g91 6	DSU150			+		
1067	ORn	H38g91 7	DSU151			+	put	
1068	ORn	H38g91 8	DSU17			+		
1069	ORn	H38g91 9	DSU18			+		

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1070	ORn	H38g92 0	DSU35			+		
1071	OR6Fn	H38g92 1	DSU41			+		
1072	ORn	H38g92 2	DSU49			+		
1073	ORn	H38g92 3	DSU50			+		
1074	OR10An	H38g92 4	DSU57			+		
1075	ORn	H38g92 5	DSU58			+		
1076	OR2Ln	H38g92 6	DSU59			+		
1077	OR10Jn	H38g92 7	DSU60			+		
1078	OR1Kn	H38g92 8	DSU63			+		
1079	OR10Dn	H38g92 9	DSU7			+		
1080	ORn	H38g93 0	DSU32			+		
1081	OR2Ln	H38g93 1	DSU38			+		
1082	ORn	H38g93 2	DSU62			+		
1083	ORn	H38g93 3	DSU48			+		
1084	OR2n	H38g93 4	DSU111			+		

Table 2

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SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
153	OR10D3	0	11	137.96SDVISV	69	M	AC074177.4	12106 ... 13038
154	OR7EnP	4	4	11.58	MVACGVLDLHIIDSFAL	53	R	AF091580.1	7 ... 663
155	OR1D5	0	17	3.75	LVVTNLLYLLLLTGIFT	49	M	AF073967.1	2 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
156	OR10Nn P	4	11	138.02	LQSGGVVHILFGNVLAT	82	M	AC074177.4	159287 ... 158526
157	OR2F1	0	7	148.62	LLGGFTSSVQIISLLT	56	M	AF073974.1	41 ... 649
158	OR7EnP	7	4	11.58	MAGGELLDLHILPALGL	54	M	AF073989.1	547 ... 1515
159	OR8FnP	6	11	137.96	LLVICEMGAHCVC SNIF	75	M	AC069561.1 0	51687 ... 50743
160	OR2Q1P	2	7	148.62	LLCGFSANMEIVSGVIL	49	M	AC020865.3	190954 ... 189954
161	OR2W1	0	6	33.74	LMGSCMINVLLVLGIVT	88	M	AF102516.1	52 ... 669
162	OR7EnP	7	4	11.58	MVACGVLDLHITHSFGL	53	R	AF091580.1	7 ... 663
163	OR6B1	0	7	148.62	LIMCCGIIAKFDLAIFF	61	M	NM_010983. 1	178 ... 975
164	OR10Kn	0	1	154.34	MLGSSACVVTLILGALI	79	M	AC073778.1	168744 ... 167803
165	ORnP	13	11	138.02	VPYCIGGHLICLSLSS	33	M	AC074177.4	12106 ... 13038
166	OR4F2P	4	6	186.49	IHGGMVLHFQFVNSICG	50	M	AB030896.1	1 ... 906
167	OR7EnP	3	4	11.58	MVACGVLDLHIIDSFGL	54	M	AF102536.1	22 ... 669
168	OR1F2P	0	16	6.15	MSADNGVNLHLIEAVTT	72	R	M64377.1	1 ... 939
169	OR2P1P	7	6	33.74	FGGSCMSNQSALVRXSV	48	M	NM_008762. 1	1 ... 936
170	OR7E43 P	5	4	5.57	MAGGELFDLHIMPAFGL	54	M	AF102536.1	22 ... 669
171	OR4F1	4	6	0.23	IHGGMVLHFQFVNSICG	50	M	AB030896.1	1 ... 906
172	OR7E55 P	5	3	89.94	MAGDEFDLHILPAFGL	53	M	AF073989.1	547 ... 1515
173	OR13Dn	0	9	86.89	MLGSCWITLQLMTNSLI	61	M	AC023789.5	371264 ... 372220
174	OR4CnP	3	16		AHGAIVGHIQFVNSICL	74	M	AF102522.1	40 ... 660
175	OR10D1 P	1	11	137.96	LHGCCGFQFLGSMPS	83	M	AC074177.4	128803 ... 129726
176	OR4Cn	0	16		LHGGIVGHVQLVNSICL	86	M	AB030895.1	1 ... 924

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
177	OR8GnP	0	11	137.96	LSAICGLGIHFVLSNIM	73	M	AC074177.4	106297 ... 105361
178	OR13CnP	2	9	86.85	MFGACGGNLQLMASFLG	82	M	AJ251154.1	2703 ... 1747
179	OR4CnP	5	16		LHEAIVLHIQFINSCL	61	M	AF102522.1	40 ... 660
180	OR13Cn	0	9	86.81	MLGTCGINVQFMATFIT	69	M	AJ133425.1	61 ... 1014
181	OR4CnP	0	16		LHGGIMGHIQLVNSMCL	63	M	AB030895.1	1 ... 924
182	OR51BnP	0	11		AHSVSGRSPVRPLITIL	76	M	AF071080.2	15931 ... 16851
183	OR7E5P	2	11	51.76	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
184	OR13Cn	0	9	86.77	MFGSCVSNVQLMSNELL	71	M	AJ251154.1	2703 ... 1747
185	OR4Sn	0	16		LHGGIAAHLQLVNSISA	56	M	AB030895.1	1 ... 924
186	OR51BnP	4	11		VHYPEWRSPPPPLVIFL	72	M	AF071080.2	15931 ... 16851
187	OR6JnP	1	14	2.72	CFGTFFGSFPLDLSVIC	50	R	M64378.1	1 ... 933
188	OR51Bn	0	11		SHAISGRSPISPQTTVL	76	M	AF071080.2	26330 ... 27262
189	OR7EnP	2	11	71.8	MFACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
190	OR2An	0	6	144.32	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
191	OR7E22P	3	3	89.94	MVACDVLDLHIIDSFGL	56	M	AF073989.1	547 ... 1515
192	OR7E4P	2	11	71.8	IVACDVLDLHIMHSFGL	55	M	AF102536.1	22 ... 669
193	OR7E66P	9	3	89.94	MAGGELLFLHIMPAFGL	55	M	AF073989.1	547 ... 1515
194	OR6Mn	0	11	138.18	TFGTFGGSFPVNLVIS	50	M	NM_010991.1	1 ... 939
195	OR2ALnP	11	11	112.69	ILGTCASNFDFFNHLLL	32	M	AL359352.1	85325 ... 86251
196	OR6MnP	2	11	138.18	TGGTFGGSCPVNLSILT	50	M	NM_010991.1	1 ... 939
197	OR4D1	0	17	60.7	IHGGVAGHVQLMNSLVI	90	M	AC019272.4	62255 ... 61317
198	OR5D2P	3	11	51.09	LCVVTTWCTLFTSANES	48	M	AC073947.3	29192 ... 30115

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
199	OR7E38 P	7	7	95.91	MAGGELFHLHIMPAFGL	55	R	AF091580.1	7 ... 663
200	OR4D2	0	17	60.7	IHGGVAGHVQLKNSLDV	89	M	AC019272.4	183633 ... 182701
201	OR7E7P	4	7	95.91	MIACGVLDLHIIDSFGL	56	R	AF091580.1	7 ... 663
202	OR5AHn P	0	19	68.97	.....RSGIMC	77	M	AC020957.2	48184 ... 49107
203	OR2U2P	5	6	33.53	LVYSCIVNIPYTMCIIV	49	M	AC044846.2	105668 ... 104736
204	OR2U1P	2	6	33.53	LVCTCMINILCCVVIFA	54	M	AF102516.1	52 ... 669
205	OR2H2	0	6	33.19	ILGTCVIEVQSVASILV	89	M	AL078630.1	41097 ... 40165
206	OR2H5P	7	6	33.19	FLGTCVIEVQSMASILV	84	M	AL078630.1	41097 ... 40165
207	OR2In	0	6	33.19	LLGSCASNAQLMARILL	74	M	AL078630.1	151152 ... 150391
208	OR11Hn P	5	13		IFNTCLCWIPLCLSVIG	60	M	AF121972.1	171 ... 1109
209	OR7EnP	6			AAACDVIDLHITHSFGL	56	M	AF073964.1	41 ... 649
210	OR9In	0	11	54.06	FTAGCGCGLRCIFGVIA	50	R	AF091579.1	7 ... 663
211	OR2AFn P	11	X	140.17	MLGTCGHVTLAGISTLL	43	R	L34074.1	73 ... 1011
212	OR13Kn P	5	X	140.17	MFGMCVIIHIGIGTLL	43	R	L34074.1	73 ... 1011
213	OR13Cn	0	9	86.77	MFGSCVSNVQLLSNFL	68	M	AJ251154.1	2703 ... 1747
214	OR13Fn	0	9	86.77	MLGSCGTTVESMISLLM	55	M	AJ133428.1	61 ... 1017
215	OR9Qn	0	11	54.08	FTGSCGASVRSIFAVIA	47	M	AF146372.1	509 ... 1456
216	OR2TnP	1	1	254.77	ILIGFGDMLVMCCMLI	71	M	AF102527.1	22 ... 669
217	OR4Kn	0	14	0.08	IHVGMIVHSHFTNSISS	56	M	AF259072.1	104176 ... 105099
218	OR2B8P	0	6	31.6	LLGSCTINLQLLVSVILV	62	R	L34074.1	73 ... 1011

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
219	OR2Tn	0	1	254.77	MLAGVALDLLITCCMLT	57	M	AF102527.1	22 ... 669
220	OR4Kn	0	14	0.08	IHTGIAMHSQFMTSIAS	53	M	AF259072.1	104176 ... 105099
221	OR2A4	0	6	144.76	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
222	OR7EnP	6	2	161.53	MVACDVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
223	OR4Kn	0	14	0.08	MHGGILVHSQFMTSIAV	57	M	AF259072.1	104176 ... 105099
224	OR13InP	6	9	86.85	MYGSCVLNNVVIGKTLL	41	M	AJ251155.1	15491 ... 16423
225	OR7EnP	8	2	161.53	MVACDVLDLHIFFDFGL	54	M	AF073989.1	547 ... 1515
226	OR6Jn	0	14	2.72	CFGTFFGSFPLDLSVIC	50	R	M64378.1	1 ... 933
227	OR4Mn	0	14	0.08	LHGAMLGHIQLMSSISV	54	M	AC019272.4	183633 ... 182701
228	OR4VnP	10	11	51.09	IHGIIVLHFQMVNSFAV	50	M	AB030896.1	1 ... 906
229	OR6Xn	0	11	138.36	AFGTFSVICQLGATVIG	46	M	AF106007.1	178 ... 975
230	OR51Gn	0	11	3.7	LHSSSSRLPLLGVVTVV	55	M	NM_013617.1	1 ... 921
231	OR6EnP	3	14	2.72	SFGTFCTLIPLGIASLG	82	M	NM_010991.1	1 ... 939
232	OR4NnP	2	14	0.08	LHGGGAGHIQLMNSMTL	54	M	AC019272.4	62255 ... 61317
233	OR6MnP	7	11	138.18	IFGTFGGARLVXSXSMVT	37	R	M64378.1	1 ... 933
234	OR4Nn	0	14	0.08	LHGGGAGHIQLMNSMTL	57	M	AC019272.4	62255 ... 61317
235	OR4Cn	0	11	51.09	LHGGIGGHIQFVNSMCA	65	M	AF102522.1	40 ... 660
236	OR4KnP	4	14	0.08	IHAGMGTHSQFMDSMGT	51	M	AF259072.1	104176 ... 105099
237	ORnP	8	11	137.59	AIAITVVVAHAAAGVVA	35	M	AC069559.8	73704 ... 74636
238	OR5D3	0	11	51.15	FCVVTAWCTYFISANES	46	R	U50948.1	34 ... 978
239	OR2G1P	6	6	33.53	LLGSCVSNIQVLASLLL	84	M	AL359352.1	85325 ... 86251

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
240	OR4Kn	0	14	0.08	IHTGMIVHSQFINSLS	51	M	AF259072.1	104176 ... 105099
241	OR8BnP	2	11	137.59	LCVFSGMGAHNIVIVGIV	68	M	AC069559.8	120212 ... 119283
242	OR2B2	0	6	31.47	LLGSCASNQWLISFLI	89	R	L34074.1	73 ... 1011
243	OR7EnP	3	2	73.87	MVACDVLDLRIIDSFGL	54	M	AF073989.1	547 ... 1515
244	OR4KnP	3	14	0.08	IHTGIVVHSQFMTSIAI	57	M	AB030896.1	1 ... 906
245	OR2AD1P	6	6	33.87	FLGACTSSIVLVFGFLV	51	M	AL136158.1 4	162423 ... 161461
246	OR1AAnP	8	X	140.17	MIVDNTIVLHLIIGVII	48	M	AC068902.1 1	144125 ... 143193
247	OR1E3P	1	17	2.99	MLGVSLHLHLMMGILI	74	R	M64392.1	1 ... 942
248	OR8BnP	3	11	137.59	FCVFSGMGAHNIVVGVIV	63	M	AC069561.1 0	96653 ... 95690
249	OR5Hn	0	3	104.18	FAGTCFGHIHLVLSIQF	55	R	AF091575.1	52 ... 663
250	OR1G1	0	17	2.99	LMVMAAMHLHLITGTGI	56	R	M64392.1	1 ... 942
251	OR5HnP	2	3	104.18	FAVTCGGHIHFVFSIQF	46	M	AC068904.1 5	165039 ... 165965
252	ORnP	5	X	140.17	MLVTCSHHFLSFTGIWS	36	R	U50948.1	34 ... 978
253	ORnP	11	X	140.17	LIVTFAKITTTQDHHHH	29	M	AC069561.1 0	127636 ... 126698
254	OR4PnP	2	11	51.09	LHGDIAGHSQVLNSISL	51	M	AB030895.1	1 ... 924
255	OR13Hn	0	X	140.17	TLATCTTVAMLITSTLL	47	M	AJ251154.1	35662 ... 36615
256	OR7D1P	5	19	11.38	VMAGTAIFVHLLATLGF	64	R	AF091580.1	7 ... 663
257	OR4KnP	2	18	47.77	IHNIGIVVHSQFMTSIAI	55	M	AB030896.1	1 ... 906
258	OR7E24	1	19	11.38	MVACDLIDLHIIMGFGL	60	R	AF091580.1	7 ... 663
259	OR51NnP	2	11	3.6	LHGFSARSPSLGVLVTV	49	R	AF079864.1	632 ... 1576
260	OR7E18P	6	19	11.38	VAGCDLLDLHIMLAFGL	59	M	AF102536.1	22 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
261	OR7E19P	2	19	11.38	MYVCDVLNLHIMDSFGL	58	M	AF073989.1	547 ... 1515
262	OR7E41P	7	11	14.36	IVVCDMLDLHIHSTFGL	55	M	AF073989.1	547 ... 1515
263	OR2R1	3	7	148.69	LLGGFVVNMELISSVLV	77	M	AF073974.1	41 ... 649
264	OR10ACnP	7	7	148.69	MVGGCGRVGLLLACLLL	46	M	AC073778.1	168744 ... 167803
265	OR51Ln	0	11	3.79	LHTFSARVPTLGVVTLV	54	R	AF079864.1	632 ... 1576
266	OR52JnP	3	11	3.79	MHTGSSRLPILGVALDA	57	M	AF121979.1	53 ... 1106
267	OR9LnP	9	8	45.22	TVVNNFFFFFFIFDLIA	37	M	AC069561.1 0	147203 ... 146274
268	OR51PnP	4	11	3.79	MHSISARLPALGVVSML	48	M	AF071080.2	2641 ... 1697
269	OR5HnP	4	3	104.18	FAVTCLGHIHFFFSIQL	50	R	AF091575.1	52 ... 663
270	OR51An	0	11	3.79	EHSVSVKLPFTYFGCLV	48	R	AF079864.1	632 ... 1576
271	OR5HnP	6	3	104.18	FAVTCLGHIHFVFSIQF	46	M	AC068904.1 5	165039 ... 165965
272	ORnP	11	17	17.43	LLPCILSIIALYYYYYY	27	M	AL359352.1	9138 ... 8177
273	OR52En	0	11	3.79	MHTGSARFPFFYCAILF	57	M	AF121979.1	53 ... 1106
274	OR5Hn	0	3	104.18	FVVTCLGHIHFVFAVQF	53	R	AF091575.1	52 ... 663
275	OR4CnP	3	11	50.21	VHRGVVGHIQFVNSICL	73	M	AF102522.1	40 ... 660
276	OR52En	0	11	3.79	MHTLSGRFPSLYCANLF	60	M	AF121979.1	53 ... 1106
277	OR10Dn	0	11	138	LHGCGGIHILLGNVLSI	86	M	AC074177.4	12106 ... 13038
278	OR5HnP	2	3	104.18	FVVTCLGHIHFVFAIQF	54	R	AF091575.1	52 ... 663
279	OR13An	0	10	47.91	LTASLALNIHLIADYGV	67	M	AF102520.1	16 ... 669
280	OR5HnP	2	3	104.18	FGGTCLGHIHILLSIQF	57	R	AF091575.1	52 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
281	OR5Kn	0	3	104.47	FCETCGAHIHLLFSVQF	45	M	AC069559.8	36251 ... 35322
282	OR7EnP	9	21	17.99	MAGGELFHLQIMPAFGL	57	M	AF073989.1	547 ... 1515
283	OR4DnP	6	8	77.48	IHGGVAGHVQVMNSLVI	87	M	AC019272.4	62255 ... 61317
284	OR2ARn P	0	3	30.89	MLGSC.....	71	M	AJ251154.1	56533 ... 57369
285	OR7E29 P	4	3	136.03	MAGGELLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
286	OR4CnP	3	11	51.12	AHGAIVGHIQFVNSICL	74	M	AF102522.1	40 ... 660
287	OR5PnP	2	11	6.93	LVGTCVGNTFCPSSIIV	74	M	AF121977.1	262 ... 1197
288	OR7EnP	5	3	136.04	MVACGVLDLHIIGSFGL	52	R	AF091580.1	7 ... 663
289	OR56An	0	11	4.73	MNLPSFRLPILQAGLLS	41	M	AF121975.1	50 ... 1012
290	OR56An P	9	11	4.73	KNQAFFRMPILQGGLLS	73	M	AF121981.1	89 ... 475
291	OR5Pn	0	11	6.89	LAATCVAISYSLSSIIV	63	M	AF121977.1	262 ... 1197
292	OR7E53 P	5	3	136.04	MAGGEFPDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
293	OR5Pn	0	11	6.89	LVGTCMGNTFCPSSIIA	83	M	AF121977.1	262 ... 1197
294	OR52Ln	0	11	4.73	MHSSSVRLPFLGMAVIL	59	M	AF121976.2	474 ... 1307
295	OR5E1	3	11	6.89	LGATXGYNIQLLFSNLG	51	R	U50948.1	34 ... 978
296	OR56An P	3	11	4.73	MNLASFMAILPPPPPP	39	M	AF121976.2	474 ... 1307
297	OR4KnP	2	8	88.25	IHTGMIVHSQFIDS...	57	M	AB030896.1	1 ... 906
298	OR52Ln	0	11	4.73	MHSSSVRLPFLGVAVVL	59	M	AF121976.2	474 ... 1307
299	OR7EnP	1	4	74.82	MVF.....	55	R	AF091580.1	7 ... 663
300	OR52Xn P	5	11	4.73	MHSASLXLSFLAVALGG	51	M	AF121976.2	474 ... 1307
301	ORnP	13	4	74.82	STGCKGRKXLKLVDRFQ	24	R	M64386.1	130 ... 975
302	OR56An	0	11	4.73	MNLTSFRVPVLQAGLLS	84	M	AF121981.1	89 ... 475

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
303	OR56AnP	10	11	4.73	LI...GMMXNL...KKK	60	M	AF121981.1	89 ... 475
304	OR1R1P	5	17	3	MVGISAVHLHLIEGVVA	48	M	AF073967.1	2 ... 649
305	OR52EnP	2	11	3.79	MHTGSGRSPFLYGAILF	64	M	AF121979.1	53 ... 1106
306	OR51AnP	4	11	3.7	EHTVALKLPLLGAGSTL	46	R	AF079864.1	632 ... 1576
307	OR51An	0	11	3.7	EHSVSVKLPFTYFGCLV	48	R	AF079864.1	632 ... 1576
308	OR4CnP	1	11	51.12	VHGGVVGHVQFVNSICL	75	M	AF102522.1	40 ... 660
309	OR52JnP	9	11	3.79	MHTGACRFPI LGVVYLN	58	M	AF121979.1	53 ... 1106
310	OR4RnP	9	11	51.12	.....GGGVXSVNGNYL	66	M	AF102522.1	40 ... 660
311	OR52Jn	0	11	3.79	MHTGACRLPMLGVVFN	58	M	AF121976.2	474 ... 1307
312	OR4CnP	3	11	51.12	VHGGGVGHIQFINSICL	76	M	AF102522.1	40 ... 660
313	OR51AnP	2	11	3.79	EHSASAKLPFTYFVTGL	83	M	AF121985.1	2 ... 478
314	OR7EnP	15	12	93.55	IVVCDLLDLHIHSTFGL	55	M	AF073989.1	547 ... 1515
315	OR5MnP	2	11	52.17	CIVLHVYLMERMVASNQ	54	M	AF102528.1	52 ... 669
316	OR10ABnP	1	11	6.93	MLASCAVFCITILSVLG	47	M	AC073778.1	168744 ... 167803
317	OR52SnP	2	11	3.79	MHSTSARLPHLSVATGV	54	M	AF121976.2	474 ... 1307
318	OR5Mn	0	11	52.14	CIVHIFYTAAWMLANFY	49	R	AF091579.1	7 ... 663
319	OR10Sn	0	11	138.1	LHASCIIHIHLMSIVAG	61	M	AF259072.1	32953 ... 32000
320	OR5MnP	4	11	52.14	CIVHIFYTTAWMLANFY	48	R	AF091579.1	7 ... 663
321	OR10Gn	0	11	138.1	LHGSCGSHVQLIDIVAG	61	M	AF259072.1	55611 ... 54658
322	ORnP	20	11	29.15	ILGIYEGSAHYFIILFL	33	M	AL365337.1	192661 ... 191711
323	OR5MnP	2	11	52.19	CIVIYGYSMEWMVANLS	54	M	AF102528.1	52 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
324	OR10GnP	10	11	138.1	LYGSCWGHLPYIVIKFT	30	M	L14567.1	17 ... 667
325	OR10TnP	1	1	154.34	LVACCACTIVLILSVLV	57	M	X92969.1	8035 ... 8961
326	ORnP	16	11	52.17	LAAPLLLVFVLAASAAA	33	R	M64376.1	1 ... 999
327	OR10RnP	11	1	154.5	MLAVFTICVFLIGGALV	47	M	AC023611.2	108224 ... 107271
328	OR5MnP	2	11	52.16	CIVHLVYTMWVMVANFY	49	R	AF091579.1	7 ... 663
329	OR7EnP	4	8	6.68	MLACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
330	OR10TnP	0	1	154.27	LLACCLTIVALLLSVIV	58	M	AC012302.5	54283 ... 55224
331	OR1E1	0	17	3.04	MLGDSLLHLHLIMGILI	83	R	Y07557.1	1 ... 942
332	OR5BKnP	4	12	42.11	STGGAIAIMDFLSQWGL	46	M	AF073965.1	2 ... 643
333	OR5MnP	3	11	52.17	CIVHIVYTMWVMVANLF	48	R	AF091579.1	7 ... 663
334	OR3A3	0	17	3.06	LHAGCACNTHALAAMAA	49	M	AF073967.1	2 ... 649
335	OR10ADnP	1	12	42.11	TFGVCTFNFLIIDAVIS	44	M	AF247657.1	1 ... 945
336	OR10RnP	0	1	154.5	MLAICAGATVLCGVLV	56	M	AC073778.1	168744 ... 167803
337	OR5TnP	4	11	51.94	MCGTCAAHIAFFVIEV	51	M	AF121977.1	262 ... 1197
338	OR4GnP	15	7	0.23	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
339	OR6Yn	0	1	154.5	LVVCYGCTIKFDLAVII	61	M	NM_010983.1	178 ... 975
340	OR1E2	0	17	3.15	MLSDSLLHLHLIMGILI	80	R	Y07557.1	1 ... 942
341	OR8Hn	0	11	51.94	MVGACGINVNWILATLV	51	M	NM_013728.1	1 ... 948
342	OR4Fn	0	7	0.23	IHGGMVHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
343	OR10Kn	0	1	154.27	MLGCSACVIILILCVLI	83	M	AC073778.1	168744 ... 167803
344	OR7LnP	11	X	140.17	MLGVCGHGTNLXFFFFI	32	M	AL133160.1	63932 ... 64759
345	OR8InP	7	11	51.94	MVVCCMINVSVSLATLG	44	R	M64386.1	130 ... 975

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
346	OR10Rn P	0	1	154.5	MLAVCTSIVGFIFGVLV	54	M	AC073778.1	168744 ... 167803
347	OR2AFn P	11	X	140.17	MLGTTCGHVTLAGISTLL	43	R	L34074.1	73 ... 1011
348	OR8Kn	0	11	51.94	LEIILVYVFLKIFSNLF	55	M	AF102528.1	52 ... 669
349	ORn P	7	10	127.57	S.CCCLLTYYIIHHHHH	31	M	AC020958.1	164590 ... 163746
350	OR8Kn P	10	11	51.94	MIIILYQMVKIFSNLF	35	M	AC073945.4	152209 ... 153150
351	OR51Hn	0	11	3.6	MHGSSRPVPLGVVTLL	49	R	AF079864.1	632 ... 1576
352	OR7En P	5	3	136.03	MVACGVLDLHIIDSFGL	51	M	AF073989.1	547 ... 1515
353	ORn P	8	3	56.17	LLLLFLIIEQH.....I	32	R	M64376.1	1 ... 999
354	OR5BMn P	20	3	103.93	KXNKCTLSSSLMVFIQF	30	M	AF146372.1	509 ... 1456
355	OR10Gn P	0	11	138.1	LHGCGGSHFQFTDILAT	63	M	AF259072.1	55611 ... 54658
356	OR2Yn	0	5	209.23	LLGSCAANIQLMARVVV	74	M	AC044846.2	139468 ... 138536
357	OR10Dn P	1	11	138.1	LHGCGGSHVLLSNVAM	66	M	AC074177.4	128803 ... 129726
358	OR3Bn P	7	X	158.48	IHAPSILNTYLLSFVAA	37	M	AL136158.1 4	29455 ... 30402
359	OR8Dn	0	11	138.1	LCVICAVDIHCIGNMA	62	R	X80671.1	203 ... 1129
360	OR5Rn P	0	11	52.13	LLMICVYVFHIFADMS	68	M	AF102528.1	52 ... 669
361	OR10Gn	0	11	138.1	LHGSCGSHVQLINIVAG	58	M	AF259072.1	55611 ... 54658
362	OR5BDn P	12	11	53.74	MTGTCVVIHRALSSITP	39	M	NM_013728. 1	1 ... 948
363	OR5ALn P	1	11	52.13	VIVVLSYVQALIANTC	52	M	AC073947.3	29192 ... 30115
364	OR52Hn P	3	11	4.15	LHFVSGRPCLGVPTVT	59	M	AF121975.1	50 ... 1012
365	OR10Gn	0	11	138.1	LHGGCSSHVQLITVVAG	56	M	AF259072.1	55611 ... 54658

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
366	OR5Mn	0	11	52.17	CIVHIVYTMEWMVANLF	52	M	AF146372.1	509 ... 1456
367	OR51Mn	0	11	4.15	MHSFSIRAPILGVVTVL	50	M	NM_013617. 1	1 ... 921
368	OR6Tn	0	11	138.1	SFGTFAAWCPLALSVLG	52	M	NM_010991. 1	1 ... 939
369	OR6DnP	5	10		SLGSFVVLGLKALVVLT	69	R	AF034903.1	85 ... 1053
370	OR4B1	0	11	45.36	IHGVIGGHIQVVNSFSF	62	M	AF102522.1	40 ... 660
371	OR5ALn P	4	11	52.13	VISVVGYMIQALIANVC	50	M	AF146372.1	509 ... 1456
372	OR51Qn	0	11	4.15	FHSFSACAPSLGLAIIV	49	M	NM_013617. 1	1 ... 921
373	OR4Dn	0	11	138.1	LHGGIAGHVQLMNNVTM	63	M	AC019272.4	62255 ... 61317
374	OR52Nn	0	11	4.58	MHTGSLRLPSLGVAIGF	52	M	NM_013619. 1	118 ... 969
375	OR4Xn	0	11	45.36	MHGGAIHGQLINGISV	58	M	AB030896.1	1 ... 906
376	OR8Jn	0	11	52.03	LLIVVLYTVVYVSANVG	77	M	X89682.1	2 ... 472
377	OR51Jn P	2	11	4.15	MHSMSIKLPLLGIVTFL	46	M	AF071080.2	15931 ... 16851
378	OR10Gn	0	11	138.1	LHGSCSSHVQLIDIVAG	60	M	AF259072.1	55611 ... 54658
379	OR52En	0	11	4.58	MHTGTVRLPFLGVIIID	66	M	AF121979.1	53 ... 1106
380	OR4Xn	0	11	45.36	LHGGIIGHAQLINGLSI	64	M	AB030895.1	1 ... 924
381	OR10A2	1	11	5.69	MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
382	OR5Mn	0	11	52.14	CIVHVYVICWMIANFY	49	R	AF091579.1	7 ... 663
383	OR52En	0	11	4.58	MHTGSVRFPFLISVVGI	59	M	AF121979.1	53 ... 1106
384	OR8Kn	0	11	51.94	LLIGLIYILVKIFADLS	53	M	AF146372.1	509 ... 1456
385	OR10An	0	11	5.66	MFGACASVVQWAATFIF	89	M	AF247657.1	1 ... 945
386	OR8LnP	3	11	52.13	LIVVMSYVLQLLANTF	51	M	AF102528.1	52 ... 669
387	OR5BPn P	8	11	52.82	VVVVVGGSIVPPVGLHL	43	R	U50948.1	34 ... 978
388	OR52Nn	0	11	4.58	MHTGSARLPFLGVAIGF	54	M	AF121976.2	474 ... 1307

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
389	ORnP	7	11	45.36	WWWWWIALLR.AAAAAK	28	M	X89686.1	32 ... 472
390	OR8JnP	1	11	51.94	LLIVILQTTVCVFSNLF	99	M	X89682.1	2 ... 472
391	OR5Mn	0	11	52.24	CIVIFVYNSQLMVATLS	50	R	AF091579.1	7 ... 663
392	OR52En	0	11	4.58	MHTVSIRMPLLGSILL	66	M	AF121979.1	53 ... 1106
393	OR5Tn	0	11	51.94	VCGTCAAHIHALFVIEV	52	M	AF146372.1	509 ... 1456
394	OR52NnP	5	11	4.58	MHTGSVQLPFLGAAIGF	51	M	NM_013619.1	118 ... 969
395	OR4B2P	6	11	45.36	IFGIIGRHVQVNSELS	53	M	AB030896.1	1 ... 906
396	OR51KnP	6	11	4.15	MHSCSGKLPPLGIVNFL	51	M	NM_013617.1	1 ... 921
397	OR52QnP	10	11	4.58	MYTGSVRFPFLFVAVGI	45	M	AF121979.1	53 ... 1106
398	OR4Fn	0	15	86.21	IHGGMIIHIQFVNSISA	50	M	AF102522.1	40 ... 660
399	OR11MnP	1	12	41.92	FSAACGSSFTL.....	48	M	AL359381.1	175785 ... 176720
400	OR52Nn	0	11	4.44	MHTGSARLPFLGVAIGF	57	M	NM_013619.1	118 ... 969
401	OR56An	0	11	4.58	MNLASFRMPILQGGLLS	73	M	AF121981.1	89 ... 475
402	OR5AWnP	14	X		LXADFTSNLPTTSSNVV	39	R	X80671.1	203 ... 1129
403	OR52Nn	0	11	4.51	MHTGSARLPFLGVAIGF	55	M	AF121976.2	474 ... 1307
404	ORnP	15	X		ISCIFELTLPLPSNVV	31	M	AC073947.3	29192 ... 30115
405	OR52EnP	6	11	4.58	VHSVSVRMPILGNIILL	62	M	AF121979.1	53 ... 1106
406	OR5BHnP	9	X		MVASCGKTVSLCGTLT	40	M	NM_013728.1	1 ... 948
407	OR4QnP	1	15	1.66	IHGAMAGHMQLMNSLSV	60	M	AC019272.4	62255 ... 61317
408	OR51En	0	11	3.04	MHSGSARLPFLGVIAIL	60	R	AF079864.1	632 ... 1576
409	OR11KnP	2	15	1.66	FSGYGFCITLLITFVFI	53	M	AF121972.1	171 ... 1109
410	OR12D1P	1	6	33.02	LHGSATIHLMSTGIAG	76	M	AL133159.4	16108 ... 15185

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
411	OR4NnP	3	15	1.61	LHGGGAGHIQLMNSMTM	55	M	AC019272.4	62255 ... 61317
412	OR11A1	0	6	33.02	FGATCTSVLVLTLSCLI	76	M	AL359381.1	175785 ... 176720
413	OR10C1	0	6	33.02	MLGACSCVGHFIATLIC	59	M	AL365336.1	122764 ... 121784
414	OR2H1	0	6	33.02	LLGTCVMQVQSLSSFVV	88	M	AL078630.1	48786 ... 47851
415	OR9RnP	8	12	59.71	LAVGGGCNIQFLLSITT	54	R	AF091579.1	7 ... 663
416	OR4FnP	0	7	0.53	.....VLHFQFVNSICG	50	M	AB030896.1	1 ... 906
417	OR7D4	3	19	11.31	VMAGTAIFVHLLATLGF	67	R	AF091580.1	7 ... 663
418	OR7E25 P	3	19	11.31	MIACSVLDLHIVIGFGL	61	R	AF091580.1	7 ... 663
419	OR2D2	0	11	5.69	LLGCCGSVVDFITGILI	65	M	AF073987.1	2 ... 649
420	OR10An	0	11	5.69	MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
421	OR2WnP	3	1	254.49	LLGGCVCQGHWVLAVVS	54	R	L34074.1	73 ... 1011
422	OR7E16 P	8	19	11.31	IAGCDLLDLHIMLALGL	60	M	AF102536.1	22 ... 669
423	OR52Pn	0	11	4.44	MHCMSARLPCLGAAVIV	59	M	AF121976.2	474 ... 1307
424	OR6AnP	4	11	5.66	LLGCCGGIVKLDLAILG	94	R	M64386.1	130 ... 975
425	OR7D2	0	19	11.24	VMPITVITLHLIMTLGF	61	R	AF091580.1	7 ... 663
426	OR52Un P	3	11	4.44	LHSASVRFPMLGVAVAY	52	M	AF121976.2	474 ... 1307
427	OR2AGn	0	11	5.6	MLGGDTLSIYYVMGFLP	55	M	AF102527.1	22 ... 669
428	OR7G3	0	19	11.24	ILVGNLVDLHMVVTLG	64	R	AF091580.1	7 ... 663
429	OR56Bn P	3	11	4.44	IHVGSFRFPVLQLAGMS	41	M	AF133300.1	25713 ... 26573
430	OR2AGn P	1	11	5.51	MLGSDTLIGHYITGFL	55	M	AF102527.1	22 ... 669
431	OR56Bn	0	11	4.44	MHVASFRCSVLQLALMS	39	M	NM_013619.1	118 ... 969
432	OR6AnP	5	11	5.51	LLGCCGGIVKLDLAILG	93	R	M64386.1	130 ... 975
433	OR4FnP	4	19	63.23	IHGGMVLHFQFVNSICG	49	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
434	OR6Wn	0	7	148.04	SFGSFAVSSPDLSFVT	47	M	NM_010991.1	1 ... 939
435	OR4Mn	0	15	1.59	LHGAMLGHIQLMSSISV	52	M	AF259072.1	104176 ... 105099
436	OR52Yn P	13	11	3.6	VVVVVVLQWPVMGMAVDF	29	M	AF133300.1	46551 ... 47498
437	OR11Hn P	2	15	1.78	FFGTCLCWIPLCLSVIG	61	M	AF121972.1	171 ... 1109
438	OR9An	0	7	148.04	LSGTFFVFSWPALMAILG	46	M	NM_010991.1	1 ... 939
439	OR5Mn	0	11	52.19	CILLFFYDFQLMSANLS	50	M	AC069563.9	129775 ... 130725
440	OR6Vn	0	7	148.04	FFGSFAAAPTSDMAFVS	45	M	NM_010991.1	1 ... 939
441	OR4Nn	0	15	1.61	LHGGGAGHIQLMNSMTL	53	M	AC019272.4	62255 ... 61317
442	OR51An P	4	11	3.6	EHTDSLILPFTGLACMS	43	M	NM_013617.1	1 ... 921
443	OR9PnP	10	7	148.04	FGSNSFEHLVFIHSLLM	39	M	NM_010983.1	178 ... 975
444	OR4H6P	3	15	1.66	MHGCI LGHVQLVNSISG	59	M	AF259072.1	104176 ... 105099
445	OR51Fn P	2	11	3.6	MHTFSLRLPLLGLTTI	48	R	AF079864.1	632 ... 1576
446	OR7E1P	3	11	68.1	MVACGVLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
447	OR51Tn	0	11	3.6	MHSLSVRFPLAGLQNT	44	R	AF079864.1	632 ... 1576
448	OR2Vn	0	13	104.15	IVVGGSFDIQVICMLF	84	M	AF102535.1	16 ... 669
449	OR51Hn P	7	11	3.6	MHGG SARAPVLGAVIIL	51	R	AF079864.1	632 ... 1576
450	OR51An	0	11	3.6	EHTVSIRLPFTGIAC TL	48	M	AF071080.2	26330 ... 27262
451	OR2AIn P	2	5	209.13	YLGSCLSNFHLMARILL	55	M	AC044846.2	112743 ... 113748
452	OR2F2	0	7	148.74	LLGGFTSNVQIISLLT	54	M	AF073974.1	41 ... 649
453	OR1F12	0	6	31.61	MMANNAINLHMVTVIFV	58	M	AC023167.7	60743 ... 61663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
454	OR7G1P	0	19	11.24	ILAGSLMDVQMIASFGI	60	R	AF091580.1	7 ... 663
455	OR7G2	0	19	11.24	ILAGNLTNLLMIAAFGV	61	R	AF091580.1	7 ... 663
456	OR1M1	0	19	11.24	MHGISAFITHLIVAVIT	89	M	X89689.1	32 ... 472
457	OR51UnP	1	11	2.89	VTDDN.....	48	R	AF079864.1	632 ... 1576
458	OR52Hn	0	11	4.19	MHFVSGRIPDLGVPTVS	59	M	AF121975.1	50 ... 1012
459	OR1F1	0	16	6.15	MFVDNGVNLHLIEGVM	75	R	M64377.1	1 ... 939
460	OR10PnP	0	16	87.09	MIGICTTTTHLVATFII	48	M	AF247657.1	1 ... 945
461	OR4FnP	4	19	7.9	IHGGMVLHFQFVNSICG	49	M	AB030896.1	1 ... 906
462	OR2T1	0	1	254.77	HLVGFGDLLIMCCMLI	92	M	AF102527.1	22 ... 669
463	OR7EnP	9	19	22.8	VAGCDLLDLHIMLAFGL	60	M	AF102536.1	22 ... 669
464	OR51Gn	0	11	3.6	LHSFSVRLPLMGVITVI	57	M	NM_013617.1	1 ... 921
465	OR2Tn	0	1	254.77	MVAGFGLDTFIMCCMLI	67	M	AF102527.1	22 ... 669
466	OR5BGnP	2	11	51.27	AAAAAGGSIHNLFAVEI	52	R	U50948.1	34 ... 978
467	OR5WnP	3	11	51.27	MGADCLVDIHCMFVVAC	51	M	AF146372.1	509 ... 1456
468	OR51Sn	0	11	3.6	MHSVSARLPLLLVLMGD	42	M	AF071080.2	26330 ... 27262
469	OR5WnP	1	11	51.27	.....LVFIES	55	M	AC074177.4	107189 ... 107708
470	OR51AnP	3	11	3.6	EHTDSLILLPTGVAMMD	46	M	NM_013617.1	1 ... 921
471	OR5Dn	0	11	51.21	FCGVTGWCILFCIANES	46	M	AF146372.1	509 ... 1456
472	OR7EnP	4	4	5.55	MVACGVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
473	OR51Fn	0	11	3.6	MHTFSSRPVVFALTTF	53	R	AF079864.1	632 ... 1576
474	OR5Dn	0	11	51.21	YCVVSGWGVLYLFANEC	48	M	NM_013728.1	1 ... 948
475	OR52Rn	0	11	3.6	VHSSSIRWPFMGVAVAF	58	M	AF121976.2	474 ... 1307
476	ORnP	27	11	51.21	FCFAAGQSPGFLCFFFF	23	M	AB030893.1	37 ... 930

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
477	OR7EnP	6	3	121.47	MVACDVLDLHIIDSFSL	57	M	AF073989.1	547 ... 1515
478	OR6Qn	0	11	54.04	LTGACAVTLPLDVSVLA	52	M	NM_010983.1	178 ... 975
479	OR4Fn	0	6	185.89	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
480	OR7EnP	3	13	40.31	FFSP.AAALHIMPAFGL	65	M	X89686.1	32 ... 472
481	OR7En	0	2	95.17	MVACDVLDLHIIDSFGL	57	M	AF073989.1	547 ... 1515
482	OR4Nn	0	14	0.27	LHGAMVGHVQLMNSLSL	58	M	AC019272.4	62255 ... 61317
483	OR2ASn P	7	1	254.77	.....GGGGMICGLLP	43	M	AF102535.1	16 ... 669
484	OR11Hn	0	14	0.33	FFGTCFIGIPYFQSVLF	90	M	AF121972.1	171 ... 1109
485	OR2Tn	0	1	254.77	MLAGFGLDMLIMCCMLI	69	M	AF102527.1	22 ... 669
486	OR2TnP	1	1	254.77	CMMGFSGDLLIMCCMLI	77	M	AF102527.1	22 ... 669
487	OR2AKn P	3	1	254.55	TLGGACSNIHVSGILL	50	M	AF102533.1	16 ... 669
488	ORnP	16	12	4.38	VLKSKCWQLPFYMLLM	25	R	Y07557.1	1 ... 942
489	OR5DnP	4	11	51.21	FCAVTGWSTLFCIANES	48	R	U50948.1	34 ... 978
490	OR7EnP	1	4	5.55	FVACDVLDLHIIDNFG	54	M	AF102536.1	22 ... 669
491	OR5L2	0	11	51.27	FCGVVCCCIHLLVANEV	53	M	AF146372.1	509 ... 1456
492	OR5Dn	0	11	51.27	FCVVLVWCTLSLVANES	48	M	NM_013728.1	1 ... 948
493	ORnP	4	9	81.99	..CCCLFFQSIASGTI	23	M	AL359381.1	82137 ... 81544
494	OR10Qn	0	11	54.08	MVGSCGLPQLLLVSVLI	50	M	AL365336.1	123248 ... 124093
495	OR9MnP	1	11	51.27	LCVDSGGSIHNLFAVEI	54	M	AC069559.8	73704 ... 74636
496	OR7E62 P	5	2	73.96	MAACDVLDLHTIDSFRL	56	M	AF073989.1	547 ... 1515
497	OR9LnP	13	11	54.06	MFVGCTLVAYGILTMIA	32	M	AC069561.1 0	147203 ... 146274

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
498	OR7E46 P	10	2	73.96	MAGVEFCDLHIMPAFGL	54	M	AF102536.1	22 ... 669
499	OR1S1	0	11	54.08	MIVVNILITHLLVGVIF	56	M	AC073769.1	133488 ... 132556
500	OR5DnP	0	11	51.21	FCVIMGWCTLSCISSEC	45	M	AC069563.9	111696 ... 112671
501	OR9InP	4	11	54.06	FTASCGGNICCSAVIT	46	R	AF091579.1	7 ... 663
502	OR5Dn	0	11	51.21	FCVVSGWCELSLLANES	53	M	AF146372.1	509 ... 1456
503	OR9QnP	4	11	54.08	FTASCGASVRTIFAVMA	47	M	AL365337.1	192661 ... 191711
504	OR51Cn P	0	11	3.04	MKTVSARMPMLGAMTVV	51	R	AF079864.1	632 ... 1576
505	OR5WnP	1	11	51.27	FCADCGVDIHL.....	53	M	AC069561.1 0	127636 ... 126698
506	OR9InP	2	11	54.06	FTAGCSCGLHCICAMFA	46	M	AC074177.4	106297 ... 105361
507	OR51An P	4	11	3.04	MHSVSARVPVPGVVTGL	72	M	X89685.1	2 ... 481
508	OR5L1	0	11	51.21	FCVVVCCCIHLLVANEV	55	M	AF146372.1	509 ... 1456
509	OR7EnP	5	13	50.42	.....VVDLHIMPAFGL	66	M	X89686.1	32 ... 472
510	OR5BLn P	18	11	54.08	ILGNXLENQCIFAMIT	29	R	M64392.1	1 ... 942
511	OR51En	0	11	3.04	MHSASVRFPPLGAIVMV	95	R	AF079864.1	632 ... 1576
512	OR51Dn	0	11	3.04	MHSASSRFPLIGIIVMV	61	R	AF079864.1	632 ... 1576
513	OR52In	0	11	3.04	MHTATARFPLMSGSMVS	46	M	AF121975.1	50 ... 1012
514	OR4KnP	2	18	19.04	IHTGMIVHSQFIDSLSS	56	M	AB030896.1	1 ... 906
515	OR52In	0	11	2.99	MHTATARAPLMSGSMVS	47	M	AF121975.1	50 ... 1012
516	OR4KnP	2	18	19.04	IHNIGIVVHSQFMTSIAI	55	M	AB030896.1	1 ... 906
517	OR52Mn P	1	11	3.04	MHATSVRYLPIGIGVLL	51	R	AF079864.1	632 ... 1576

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
518	ORnP	7	6	31.58	FLVSCLLLLLLLEGIHW	30	M	AF073964.1	41 ... 649
519	ORnP	9	8	88.25	IXVVVLNIVNMTTIIFL	24	M	AC074177.4	149899 ... 148964
520	ORnP	9	10	70.63	YSIVMFYHAHFICELN	26	M	AC068902.1 1	144125 ... 143193
521	ORnP	9	9	70.7	WWWWSWYGNFDD SITX	26	R	AF091563.1	7 ... 669
522	ORnP	9	5	202.43	FFFFFF.PPPPP.....	27	R	AF034902.1	4197 ... 5177
523	ORnP	10	11	137.77	LLLLWSQFXQFLAVVVV	29	R	M64376.1	1 ... 999
524	ORnP	3	11	16.31	NNNNNLLXMNILTLLAI	27	M	AL136158.1 4	29455 ... 30402
525	ORnP	17	11	55.6	LAGNNIYCYHM..LLLL	26	R	M64377.1	1 ... 939
526	OR6Pn	0	1	154.6	LIACCASSMKFDLAMIL	60	M	NM_010983. 1	178 ... 975
527	OR7EnP	3	14	33.48	MVACDVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
528	ORnP	12	11	138.51	LMCHS.FFFFFFFMMMMM	29	R	AF091573.1	7 ... 663
529	OR7EnP	5	14	33.48	MAGGDFLDLYILPDFGL	55	M	AF073989.1	547 ... 1515
530	ORnP	7	10	127.4	S.CCCLLYIIHHHHHH	31	M	AC020958.1	164590 ... 163746
531	OR10XnP	2	1	154.6	MLGGCSAITELIISGLG	49	M	AC073778.1	168744 ... 167803
532	OR10Zn	0	1	154.71	MAACCTTFGMVILSVLV	56	M	AC025913.3	108128 ... 109067
533	OR6KnP	2	1	154.73	MYGIVGCTPEWVVEIT	40	R	M64386.1	130 ... 975
534	OR6Kn	0	1	154.73	MHGIVSCTPEWVIHEIT	44	M	AC027184.3	54955 ... 54017
535	OR1FnP	1	4	97.57	.....IEGVMT	73	R	M64377.1	1 ... 939
536	OR1ABnP	3	19	19.44	MIGISAFNTHLV.....	64	M	AC073769.1	133488 ... 132556
537	OR52MnP	1	11	2.89	MHATSARYLPIGIGVLL	49	M	AF121975.1	50 ... 1012
538	OR1XnP	6	5	202.43	MIANTLGIVHIFAALFA	71	M	AF102530.1	1 ... 666

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
539	OR4FnP	8	16	83.04	QQQQQVIHSQFVNSLTC	46	M	AC019272.4	62255 ... 61317
540	OR52Mn P	5	11	2.89	MHATSVRYLPIGIGVLM	45	R	AF079864.1	632 ... 1576
541	OR2Vn	0	5	209.61	IVVGGSFDIQVICCMLF	83	M	AF102535.1	16 ... 669
542	OR2V1P	4	5	209.61	IVVGGSFDIQALCCMLL	90	M	AF102537.1	16 ... 669
543	OR2Zn	0	19	65.55	ITGVGSVNIQILSGILL	76	M	AC073769.1	54319 ... 55289
544	OR52Kn P	5	11	2.89	.....AMFIEL	52	M	AF121975.1	50 ... 1012
545	OR10Hn	0	19	19.7	MFGFSWGMVIGLVTAI	75	M	AC023604.2	214343 ... 213396
546	OR2Dn	0	11	5.77	ILGCCRSVVD FIMGILA	85	M	AF073987.1	2 ... 649
547	OR7EnP	6	2	161.49	VVGCCSSDLHIMPAFGL	64	M	X89686.1	32 ... 472
548	OR11Gn P	4	14	0.27	FFGSCSLWIPVSLSLLI	68	M	AC027184.3	54955 ... 54017
549	ORn P	12	14	0.27	GSCGNSLHHYLMVNIIL	28	M	AF121972.1	171 ... 1109
550	OR11Gn	0	14	0.33	FFGSCNLWIPNFLSPVM	67	M	AF121972.1	171 ... 1109
551	OR11Hn P	5	14	0.33	FTGTAFFSVSQFLSIIL	68	M	AF121972.1	171 ... 1109
552	OR6Kn	0	1	154.73	MHENGGFIPMDHATII	46	R	AF034897.1	354 ... 1199
553	OR11Hn	0	14	0.33	FFGTCVGCVP LCFNIIG	71	M	AF121972.1	171 ... 1109
554	OR6KnP	0	1	154.73	MHGNGGFVPEWDHAAIF	46	M	AL365336.1	122764 ... 121784
555	OR11Hn P	2	14	0.33	FFGTCLIGISFFVVSFIL	70	M	AF121972.1	171 ... 1109
556	OR6KnP	2	1	154.82	MHGVAGFMPECDRASIT	43	M	AC027184.3	54955 ... 54017
557	OR6Kn	0	1	154.84	MHGISGCLPEWVIHEIA	45	R	AF034900.1	1 ... 963
558	OR2Ln	0	1	254.55	SSGGAGINAHYVSTFLF	53	M	AF102527.1	22 ... 669
559	OR4GnP	8	16	83.04	ICRKMAVHSQFVNSISA	45	M	AB030892.1	1 ... 939

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
560	OR6Nn	0	1	154.84	IHGACGGGVELDINKIA	50	R	M64386.1	130 ... 975
561	OR2LnP	2	1	254.55	SLAVGGINAHY.....W	52	M	AF102535.1	16 ... 669
562	OR9A1	0	7	146.91	LLGTLVLSPALMAIIG	45	M	L14567.1	17 ... 667
563	OR6Nn	0	1	155.69	THGACACCSELDINIII	51	M	AL136158.1 4	29455 ... 30402
564	OR10Hn	0	19		MFGFSCGMVVAGLVTAL	86	M	AC023604.2	245345 ... 246298
565	OR7EnP	4	9	71.72	MVACDVLDLHIMNSFGL	57	M	AF073989.1	547 ... 1515
566	OR2AQn P	5	1	155.69	FCHSCLLLSLLPFFFF	31	M	AL359352.1	55588 ... 56546
567	OR2LnP	3	1	254.55	SMAGAGINAHYVSSFLF	50	M	AF102537.1	16 ... 669
568	OR5ARn	0	11	52.46	FVVDGASAHLLLCIES	53	R	AF091579.1	7 ... 663
569	OR7EnP	4	9	71.79	TAGGETLDLHIMPAFGL	57	M	AF102536.1	22 ... 669
570	OR10AA nP	2	1	155.69	THGMCAAAPLHVATC	84	M	AC005992.1 5	9114 ... 8173
571	OR10Jn P	4	1	157.7	MIAICGVVVQSNVSVIV	72	M	X92969.1	8035 ... 8961
572	OR5A1P	0	11	55.81	FVGLCGGSIQSNVVVGT	81	M	Y15525.1	1 ... 705
573	OR2AHn P	5	11	52.46	MLGSCISSVILVFSIVI	51	M	AF247657.1	1 ... 945
574	OR10Jn P	4	1	157.7	LLGICGIMVQSNVSVLL	68	M	X92969.1	8035 ... 8961
575	OR56Bn P	2	11	4.93	IHMCSSRLPVLQLVVVS	39	M	AF121975.1	50 ... 1012
576	OR5M1	0	11	52.35	CIVIFIYSSQLMVANLS	49	R	AF091579.1	7 ... 663
577	OR52Wn P	0	11	4.93	MHTASLLAVPLGLSISM	48	M	AF121976.2	474 ... 1307
578	OR5AMn P	5	11	52.35	FIVIIYAYNVQLMVANLC	35	M	AC068904.1 5	113793 ... 114719
579	OR52Bn P	3	11	4.93	MHFVSTQTPVLGVPSVV	89	M	AF121975.1	50 ... 1012
580	OR5MnP	1	11	52.35	CVLLYFWVMQLLSANLV	48	R	X80671.1	203 ... 1129

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
581	OR5APn P	6	11	52.35	FGAGGALNIHFIFANES	55	R	X80671.1	203 ... 1129
582	OR56Bn	0	11	4.95	IHFCSFRLPVLQLALVS	41	M	AF121975.1	50 ... 1012
583	OR5APn	0	11	52.35	FGLGCTANIHMFISIVS	55	M	AF121977.1	262 ... 1197
584	OR52Bn	0	11	4.93	GHFVSARIPVLGVPMVL	73	M	AF121975.1	50 ... 1012
585	OR9Gn	0	11	52.5	FAAYCVGNIIKMLLNVC	45	M	AC074177.4	106297 ... 105361
586	OR52Kn	0	11	2.86	MHSISARLPLLGVASVL	53	M	NM_013619. 1	118 ... 969
587	OR5MnP	1	11	52.35	FIVIIYAYNSQLMVANLC	51	M	AC074177.4	106297 ... 105361
588	OR52Kn	0	11	2.86	MHSISARLPLLGVAIVL	52	M	NM_013619. 1	118 ... 969
589	OR52Kn P	3	11	2.82	MHSISARLPLLGVAIGL	53	M	NM_013619. 1	118 ... 969
590	OR52Bn P	4	11	2.78	IHFISARVPDLGVLTVL	57	M	AF121975.1	50 ... 1012
591	OR2B6P	0	6	31.62	LLGAYATNWLLLVSFHI	79	R	L34074.1	73 ... 1011
592	OR2WnP	7	6	31.61	LLRGCASNVMLAFAIVL	58	M	AF102516.1	52 ... 669
593	OR2AnP	5	7	148.83	TMAHCTCLVHLISSILG	72	M	AF102521.1	22 ... 669
594	ORnP	16	6	31.61	FLVSCMDFMIVLNNVI	39	M	AF102516.1	52 ... 669
595	OR2LnP	0	1	254.55	STAVAGINAHYVSAFLF	50	M	AF102527.1	22 ... 669
596	OR2W2P	5	6	31.61	LLGGCVCQSYWVLSIVM	55	R	L34074.1	73 ... 1011
597	OR2LnP	1	1	254.55	SLAGA.....	61	M	AF102535.1	16 ... 669
598	OR2B7P	1	6	31.61	LLGGCTTNIQLIVSFLV	59	M	AC044846.2	105668 ... 104736
599	OR2Ln	0	1	254.43	SLGGAGINAHYVSAFLF	53	M	AF102527.1	22 ... 669
600	OR5BFn	0	1	254.77	VVVYLASYMHSISAVGG	46	M	AL359352.1	9138 ... 8177

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
601	OR2LnP	4	1	254.55	SVAGMSMDAHYVSTFLF	47	M	AF102527.1	22 ... 669
602	OR7EnP	3	10	17.14	MVACCVLDLHI.....	51	R	AF091580.1	7 ... 663
603	OR1H1	2	9	106.04	LGADNVIHVHLLVALLA	57	M	AC073769.1	133488 ... 132556
604	ORnP	14	1	254.49	TTTKKSERIYIVSSFLI	24	M	AF102527.1	22 ... 669
605	OR4Dn	0	11	55.81	IHGGIASHIQLMNNVTL	64	M	AC019272.4	183633 ... 182701
606	OR1Ln	0	9	106.04	MYGNSFFHLHLQEAVLT	54	M	AC023167.7	60743 ... 61663
607	OR5AXn	0	1	254.2	LTSAIVIFAYGGVGLSS	47	M	AL136158.1 4	154973 ... 155908
608	OR5An	0	11	55.77	YCGLCGGSIESTVSVGV	64	M	Y15525.1	1 ... 705
609	OR5AYn	0	1	254.2	LVAGILNLLYGSIGYAS	50	M	AL359352.1	126933 ... 127889
610	OR13Gn	0	1	255.42	LTLGMMINVHLVADLAG	59	M	AF102540.1	16 ... 669
611	OR5BBn P	0	11	55.77	YASLCGGSVHPLEAVGG	54	M	Y15525.1	1 ... 705
612	OR9GnP	6	11	52.49	FVXNCAGNIIEMLNIT	47	M	AF121977.1	262 ... 1197
613	OR2TnP	4	1	254.77	HLAGFAGNLLVMCCMLI	75	M	AF102527.1	22 ... 669
614	ORnP	7	1	255.42	PVAGKGAFLHSVESLGS	38	M	AL365337.1	192661 ... 191711
615	OR1Jn	0	9	95.9	MITDSVLSSHLMVGVI	66	M	AF102524.1	52 ... 669
616	OR2CnP	1	16	6.47	LLGACIGNIQFLVCFTV	85	M	M84005.1	1 ... 936
617	OR9GnP	2	11	52.49	FAAYCYGNILNLLNVS	49	M	AL365337.1	192661 ... 191711
618	OR2C1	0	16	6.4	LLGACIGNIQFLVCFTV	85	M	M84005.1	1 ... 936
619	OR51An P	2	11	4.22	.....	52	M	AF071080.2	26330 ... 27262
620	OR9Gn	0	11	52.49	LCAYCGGNAHNLVTVS	53	M	AC068904.1 5	165039 ... 165965

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
621	OR52Bn	0	11	2.78	LHFISTRTPILGILTVL	61	M	AF121975.1	50 ... 1012
622	OR1K1	0	9	105.89	MFGVSMVHLYLIEGVVT	58	R	M64377.1	1 ... 939
623	OR51Rn P	3	11	2.78	MHTYSARLPGLGSISLL	47	R	AF079864.1	632 ... 1576
624	OR7EnP	2	13	54.83	MVACDVLDLHILDSFGL	57	M	AF073989.1	547 ... 1515
625	OR52Pn P	3	11	2.82	MHSASARLP LLGAAVVT	55	M	AF121975.1	50 ... 1012
626	OR7EnP	5	9	70.7	MVACDVQYVHSMDSFGL	48	M	AF102536.1	22 ... 669
627	OR7EnP	5	9	70.7	TAGGD.CCCCC.....	43	M	AF073989.1	547 ... 1515
628	OR4KnP	1	21	8.12	IHTGMIVHSQFIDSLSS	57	M	AF259072.1	104176 ... 105099
629	OR4KnP	2	21	8.12	IHNIGIVVHSQFMTSTAT	54	M	AB030896.1	1 ... 906
630	OR7EnP	6	9	70.7	.....VFLVHSPVAFGL	58	M	X89686.1	32 ... 472
631	OR51In	0	11	4.15	MHSFSGKTPFVGVITYM	51	R	AF079864.1	632 ... 1576
632	OR51In	0	11	4.15	MHSMSGRTPLLGVLTfM	56	R	AF079864.1	632 ... 1576
633	OR2AnP	1	7	148.83	TLAICTFL.....	63	M	AF102521.1	22 ... 669
634	OR2A2	2	7	148.83	TLAVCTCLVHLITCVLG	68	M	AF102521.1	22 ... 669
635	OR2AnP	8	7	148.83	TFAACTCLVHLITCVLG	68	M	AF102521.1	22 ... 669
636	OR2Gn	0	1	256.63	LHGSCMSTVQLLASFLV	59	M	NM_008762. 1	1 ... 936
637	OR2AnP	0	7	148.83	TLAHCAFFFFL.....	57	M	AF102521.1	22 ... 669
638	OR6Fn	0	1	254.2	MFGCYGCAVPLAIAVIS	71	R	M64378.1	1 ... 933
639	OR2AnP	4	7	148.83	TLAHCAFLVHLISCILG	68	M	AF102521.1	22 ... 669
640	OR2Gn	0	1	256.02	LLGSCISSIHFLVSFVI	63	M	M84005.1	1 ... 936
641	OR7E37 P	5	13	26.5	MAGGEFLDLHIMPAFGL	57	M	AF073989.1	547 ... 1515
642	OR5AVn	0	1	256.02	AMATVMSCMHAVFGLVI	51	M	AL359352.1	9138 ... 8177

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
643	OR2AJn P	7	1	254.43	VLLGCGINVHYVSAFLI	55	M	AF102527.1	22 ... 669
644	OR13En P	1	9	39.89	MLGSCLTNLQLLATLTA	79	M	AJ251155.1	15491 ... 16423
645	OR2Cn	0	1	257.85	FHGACAGTVGLMASFVL	63	M	M84005.1	1 ... 936
646	OR2TnP	0	1	254.43	IPGGCSLDLQAMCCMLV	59	M	AF102537.1	16 ... 669
647	OR2WnP	2			LMGSCVCNIMQTLGLLV	56	M	M84005.1	1 ... 936
648	OR13Jn	0	9	39.89	MLGSCALKTEILGSLLV	82	M	AJ251155.1	6062 ... 6997
649	OR6RnP	2	1	254.39	SFGCFLGLPSLDSSLIS	45	M	NM_010983. 1	178 ... 975
650	OR5ATn	0	1	254.39	VLASLVYIMHGLINLDC	50	M	AL359352.1	111313 ... 112242
651	OR2Zn	0	19	10.64	ITGVGSVNIQILSGILL	76	M	AC073769.1	54319 ... 55289
652	OR4Ln	0	14	0.08	MHGGMLIHSQVLDSLST	53	M	AB030893.1	37 ... 930
653	OR4UnP	14	14	0.15	RHSGMAMHSQVLDSLST	46	M	AB030895.1	1 ... 924
654	OR4Fn	0	6	185.98	IHGGMIHIQFVNSISA	50	M	AF102522.1	40 ... 660
655	OR4FnP	2	6	185.98	IHGGMAIHVQFVNSISS	50	M	AB030896.1	1 ... 906
656	OR4Fn	0	6	185.98	IHGGMATHVQFVNSISG	50	M	AB030896.1	1 ... 906
657	OR4Fn	0	6	185.98	IHGGMTIHVQFVNSISG	50	M	AB030896.1	1 ... 906
658	OR4AnP	5	11	50.28	IHGILGHVQFVNDICV	65	M	AF102522.1	40 ... 660
659	OR4LnP	1	14	0.21	KHGSMLIHSQVLDSLST	53	M	AB030893.1	37 ... 930
660	OR7E33 P	6	13	54.79	MAGGEFLDLRILPAFGL	56	M	AF073989.1	547 ... 1515
661	OR2Cn	0	1	257.85	FHGACAGTVGLMASFVL	63	M	M84005.1	1 ... 936
662	OR4Kn	0	14	0.15	MHGGMSVHSQFVDSLST	53	M	AF259072.1	104176 ... 105099
663	OR5U1	0	6	33.45	VIASVAASMHILFTAAI	84	M	AL359352.1	111313 ... 112242
664	OR4Kn	0	14	0.08	IHGGMAVHSQFMDLSS	58	M	AF259072.1	104176 ... 105099

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
665	OR5V1	0	6	33.45	LVVGCSANVHLLTGIGT	84	M	AL365337.1	192661 ... 191711
666	OR4QnP	1	14	0.08	LHGAMAGHVQLMNSISI	62	M	AF259072.1	104176 ... 105099
667	OR12D3	0	6	33.45	LHGSAAIYMHMLVTISG	70	M	AL359381.1	128169 ... 127234
668	OR4Kn	0	14	0.08	IHTGMIVHSQFIDSLSS	59	M	AF259072.1	104176 ... 105099
669	OR51CnP	3			MKTVSARMPMLGAMTVV	53	R	AF079864.1	632 ... 1576
670	OR1J2	0	9	105.94	MITDSVLSSHLMVGVIL	66	M	AF102524.1	52 ... 669
671	OR5BJnP	3			SIGSAAVNTKFPSC LGV	46	M	AF073965.1	2 ... 643
672	OR1J1	0	9	105.82	TIADSGICLHLIAAAIL	63	M	AF102524.1	52 ... 669
673	OR13En	0			MLGSCLTNLQLLATLTA	83	M	AJ251155.1	15491 16423
674	OR4KnP	5	14	0.08	IHGGMVIHTHFVNSLSM	53	M	AB030893.1	37 ... 930
675	OR1LnP	5	9	105.84	MYGNSFFHLHLQEAVLT	54	M	AC023167.7	60743 ... 61663
676	OR2CnP	2			FHGACAGTVGLMASFVL	59	M	M84005.1	1 ... 936
677	OR4TnP	9	14	0.21	MLSELLSHSQFVKLSI	47	M	AC019272.4	62255 ... 61317
678	OR5BnP	1			FVITSGCNIHNIVVNDF	51	M	AF121977.1	262 ... 1197
679	OR4Kn	0	14	0.21	IHGGM TLHFQFINSISS	53	M	AB030896.1	1 ... 906
680	OR11Ln	0	1	254.43	LVGACVTTLHMILSVLI	50	M	AF121972.1	171 ... 1109
681	OR7E68P	5	10	17.21	MAGGELLDLHIMPAFGL	56	M	AF102536.1	22 ... 669
682	OR7EnP	2	10	17.21	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
683	OR7E31P	6	9	70.71	TAGGELLDLHIMPAFGL	55	M	AF073989.1	547 ... 1515
684	OR7EnP	3	9	70.71	MVACDVLDLHIMDSFGL	58	M	AF073989.1	547 ... 1515

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
685	OR5AKn P	3	11	52.82	LAATCGMNVHFLFVNLF	79	R	U50948.1	34 ... 978
686	OR5AKn	0	11	52.83	FAATCGMNVQFLFVNLF	79	R	U50948.1	34 ... 978
687	OR5AKn	0	11	52.83	FAATCGINVFDFVDLF	79	R	U50948.1	34 ... 978
688	OR5BQn P	9	11	52.82	TTTTTLLLLLMLTFFFF	42	R	U50948.1	34 ... 978
689	OR1Nn	0	9	105.94	LLGGNVLPMLHIMGFLV	56	R	AF091566.1	1 ... 663
690	OR1J4	0	9	105.94	MITDNVLNSHLIVGVIL	69	M	AF102524.1	52 ... 669
691	OR1Nn	0	9	105.94	MLGDSLLVTHLVLGVLV	85	R	AB038167.1	1 ... 933
692	OR2AnP	4	3	94.41	TLAVCTIMVHHLGSIVG	65	M	AF102521.1	22 ... 669
693	OR2ANn P	17	9	93.78	.....VVVLEFMVNLLI	23	M	AC074177.4	128803 ... 129726
694	OR5K1	0	3	104.47	FCETCGAHIHLFSVQF	51	R	AF091575.1	52 ... 663
695	OR2K2	0	9	93.78	MLGSCVTTLFVMVSLLI	60	M	AJ251154.1	35662 ... 36615
696	OR8Hn	0	11	51.76	MAGTCGIDVNSIIVTLV	51	M	AC069559.8	36251 ... 35322
697	ORnP	15	11	51.76	LIFKNLFSPLXXHYIL	28	M	X89682.1	2 ... 472
698	OR4AnP	14	11	50.28	FGRRVVGHIQLYGHNYV	38	M	AB030895.1	1 ... 924
699	OR4An	0	11	50.28	LHGGVVGQFQIVNGSCI	59	M	AB030895.1	1 ... 924
700	OR6Sn	0	14	0.58	FFGAFAAGPGPADLAVIS	50	R	M64378.1	1 ... 933
701	OR4RnP	16	11	50.28	NLGAIMEHVXSVNGNYL	52	M	AF102522.1	40 ... 660
702	OR13Cn	0	9	86.77	MLGTCGINVQFLTTFLT	65	M	AJ133425.1	61 ... 1014
703	OR13Dn P	4	9	86.77	MYGSCVLNTELIGNFLS	64	M	AC023789.5	371264 ... 372220
704	OR7EnP	3	11	2.13	MIACGVLDLHIINSFGL	54	R	AF091580.1	7 ... 663
705	OR10Pn P	1	12	59.88	MIGICTTTTHLVATFII	49	M	AF247657.1	1 ... 945
706	OR8In	0	11	51.76	MVVCCMISISVSLATLS	50	M	AC069559.8	137090 ... 138039
707	OR8G1	0			..IIIGICVHCIVGNIV	75	R	AF091576.1	52 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
708	ORnP	7	12	59.88	CFPGEAFFTLL.....	34	M	AL359352.1	145887 ... 145042
709	OR5F1	0	11	51.76	MIATCGANVNHSLANIG	50	M	Y15525.1	1 ... 705
710	OR5FnP	1	11	51.76	MIATCGANVNYFFANKG	52	M	Y15525.1	1 ... 705
711	OR6BnP	6	2	251.7	LSVCCFSIIKFDLAILF	70	M	L14567.1	17 ... 667
712	OR2D1	0			LLGCCASVVDFITGILI	64	M	AF073987.1	2 ... 649
713	OR5ASn	0	11	51.76	MAADCLSTVHLLLCIQS	52	M	AC068904.1 5	165039 ... 165965
714	OR5SnP	8	2	251.7	FSSTTGRSVQLKLCMMN	64	R	AF091579.1	7 ... 663
715	OR5AQn P	0	11	51.76	SAVTDAGNTHGPFSAF	51	R	X80671.1	203 ... 1129
716	OR6BnP	3	2	251.7	LSVCCFSIIKFDLAILF	67	M	L14567.1	17 ... 667
717	OR5JnP	2	11	51.76	YVLTGGGNTHGLFSIAL	52	R	X80671.1	203 ... 1129
718	OR9AnP	4	7	146.91	QLGTLVFFWPALMAIIG	44	M	NM_010991.1	1 ... 939
719	OR5BEn P	2	11	51.76	YSLTCVLNTHSFLSTST	45	R	AF091564.1	7 ... 663
720	OR9An	0	7	146.91	LLGTFVFFWPVLMVAVLG	47	M	NM_010991.1	1 ... 939
721	OR8Hn	0	11	51.76	MVGTCGIDVNSIIATLV	51	M	AC069559.8	36251 ... 35322
722	OR5BNn P	14	11	51.76	LLMTCAYMSHS.....P	54	M	AF102528.1	52 ... 669
723	OR8Jn	0	11	51.76	LLIVVLYTVVCVSANLF	80	M	X89682.1	2 ... 472
724	OR9NnP	9	7	146.91	LFGTFIIIIIL.AAAAA	36	M	NM_010991.1	1 ... 939
725	OR7EnP	4	7		MVACGMLDLHITHSFAL	51	R	AF091580.1	7 ... 663
726	OR7E9P	3	7		MVACDVLDLHVIDSFGL	51	M	AF073989.1	547 ... 1515
727	OR8KnP	8	11	51.76	MMITLICQIIDILTNP	36	M	AC069563.9	28460 ... 29383
728	OR2AnP	1	7	148.97	ILAHC.....	44	M	AF102521.1	22 ... 669
729	OR8Kn	0	11	51.76	LLIIFIYQMFKSFSNLS	56	M	AF102528.1	52 ... 669
730	OR7E39 P	4			MVGGEFLFHLHIMPAFGL	55	R	AF091580.1	7 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
731	OR7E27P	3			MAGGELLDLHIMPAFGL	57	M	AF102536.1	22 ... 669
732	OR2Hn	0	6		FLGTCVMEVQSLASILV	81	M	AL078630.1	41097 ... 40165
733	OR13CnP	2	9	40.16	MLGACGATVQLMANFLV	87	M	AJ133428.1	61 ... 1017
734	OR13Cn	0	9	40.16	MFGACGAAVQLMTNFLV	89	M	AJ133424.1	61 ... 1017
735	OR2S1P	4	9	40.16	MFGACGANVQLMTNELL	89	M	AJ251154.1	2703 ... 1747
736	OR2AMnP	1	9	40.16	.....RRRRRV.MMMMM	63	M	AJ251154.1	2703 ... 1747
737	OR1N1	0	1		MLGDSLLVTHLVLGVLV	85	R	AB038167.1	1 ... 933
738	OR2S2	0	9	40.13	MFAGCSIIVHLMTNFLV	83	M	AJ251154.1	2703 ... 1747
739	OR7E26P	4	1		MAGGELLDLHIMPAFGL	56	M	AF102536.1	22 ... 669
740	OR1F11	0			LAGNNGVNLHLIEGVM	99	R	M64377.1	1 ... 939
741	OR5ACnP	3	3	103.97	FGATCIIHILFISIQF	66	R	AF091575.1	52 ... 663
742	OR5B10P	2	13		MVATNGCNLRDLMSNVL	46	M	AF102528.1	52 ... 669
743	OR2AnP	1	12	85.7	TLAVCAFLVHLIACILG	76	M	AF102521.1	22 ... 669
744	OR1E5	0	13		MLGDSLLHLHLIMGILI	83	R	Y07557.1	1 ... 942
745	OR4Fn	0	6	185.71	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
746	OR5CnP	0	9	40.53	MAADC.....	47	M	Y15525.1	1 ... 705
747	OR2WnP	0	6	31.62	LLGGCVSNIMQALAIIA	64	M	AF102516.1	52 ... 669
748	OR2L2	0			..IIIGINAHYVSSFL	48	M	AF102537.1	16 ... 669
749	OR4H8P	2	14		MHGCI LGHVQLVNSISG	56	M	AF259072.1	104176 ... 105099
750	OR5D10P	5			LCVVTWCTLFTSANES	44	R	AF010293.1	211 ... 1143
751	OR7A12P	1	14		MVIVSAMNIEMMSALGG	68	M	AF283558.1	1 ... 927
752	OR2L1	0			..IIIGINAHYVSTFLF	48	M	AF102527.1	22 ... 669
753	OR2F3P	0	14		LLGGFTSSVQIISSLLT	55	M	AF073974.1	41 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
754	OR4H10 P	2	15		MHGCI LGHVQLVNSISG	57	M	AF259072.1	104176 ... 105099
755	OR5H1	0			..IIILGHIHFVFSIQF	56	R	AF091575.1	52 ... 663
756	OR2K1	0			..IIIIITTLVCMVSLLI	58	M	AJ133428.1	61 ... 1017
757	OR7E11 P	7	11		MAGGEFLDLHILPAFGL	52	M	AF073989.1	547 ... 1515
758	OR7A3P	1	11		MVIVSAMNIEMMSALGG	68	M	AF283558.1	1 ... 927
759	OR6A1	0	11		LLGCCGGIVKLDLAILG	91	R	M64386.1	130 ... 975
760	OR5I1	0	11		FCADSLG SVHFLYGVEI	52	M	Y15525.1	1 ... 705
761	OR2H3	0	6		ILGTCVIGVQSVASILV	86	M	AL078630.1	41097 ... 40165
762	OR10J1	0			MVGICGIVTQSTISVLV	73	M	X92969.1	8035 ... 8961
763	OR7E3P	3	11		MFACGVLDLHIIDSFGL	54	M	AF102536.1	22 ... 669
764	OR1D6P	1	11		LVVANLFYIHLTGIFT	48	R	Y07557.1	1 ... 942
765	OR5D10 P	2	18		LCVVTTWCTLFTSASES	45	R	U50948.1	34 ... 978
766	OR5D5P	2	18		LCVVTTWCTLFTSANES	46	M	AC073947.3	29192 ... 30115
767	OR52A1	0	11		MHQGSMVCLIGVAVAF	72	M	NM_013620. 1	1 ... 945
768	OR2AEn	0	7	98.36	HLGGCMGNIHIVSSLL	48	M	AC073769.1	143294 ... 142353
769	OR6LnP	7	10	149.44	LLSSCSSAVSLRAAILA	40	M	NM_010983. 1	178 ... 975
770	OR6LnP	7	10	149.44	LLSSCSSAVSLRAAILA	41	M	NM_010983. 1	178 ... 975
771	OR7MnP	7	10	149.44	.....NVYVSL.....	29	M	AC073947.3	43325 ... 42733
772	OR13Cn	0	9	86.77	MFGACGTDVQFMSNVLI	69	M	AJ133428.1	61 ... 1017
773	OR13Cn	0	9	86.85	MLGTGANVQFMATFTM	71	M	AJ133425.1	61 ... 1014
774	OR2InP	6			LLGSC.....	79	M	AL078630.1	151152 ... 150391

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
775	OR4An	0	11	50.28	LHGGVVGHFQVNSICV	58	M	AB030895.1	1 ... 924
776	OR2InP	3			.....RRRRRMARILL	77	M	AL078630.1	151152 ... 150391
777	OR4AnP	4	11	50.28	LHGGVVGSGFQVNGICV	53	M	AB030896.1	1 ... 906
778	OR4AnP	7	11	50.28	PHGGAVAHFQVNGICV	57	M	AB030896.1	1 ... 906
779	OR8C1P	2	11		LCVHCGMGVHCMIVVVV	72	M	AC068905.1	76922 ... 75948
780	OR4AnP	1	11	50.28	LHGDVVGHFQVNGICV	56	M	AB030896.1	1 ... 906
781	OR7E15 P	5	11		MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515
782	OR10A1	0	11		MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
783	OR2An	0			TSAVCTCLVHLI.....	70	M	AF102521.1	22 ... 669
784	OR7EnP	6			MAGGELFHLHIMPAFGL	57	M	AF073989.1	547 ... 1515
785	OR7En	0			MAGGDFLDLHIVPAFVL	54	R	AF091580.1	7 ... 663
786	OR51A1 P	5	11		MHTLSARLPLLAVITFL	43	R	AF079864.1	632 ... 1576
787	OR7E47 P	4			KAGTNLLDLYIMPTFGL	56	M	AF073989.1	547 ... 1515
788	OR5B5P	2	3		MAATNICNIHELVANIS	48	M	AF146372.1	509 ... 1456
789	OR1F10	0	3		MFVDNGVNLHLIEGVM	72	R	M64377.1	1 ... 939
790	OR8G2	0			..IIIGLGIHFVLSNIT	75	M	AF102518.1	52 ... 669
791	OR1Sn	0	11	54.08	MIVVNILITHLLVGIVF	55	M	AC073769.1	133488 ... 132556
792	OR4AnP	3	11	50.73	LHGGAVGHFQVVSGLCV	56	M	AB030896.1	1 ... 906
793	OR4AnP	7	11	50.76	LHGGILGHFQVVGMCV	58	M	AB030896.1	1 ... 906
794	OR4AnP	5	11	50.66	LHGGVLGHFQVVGMRV	56	M	AB030896.1	1 ... 906
795	OR4AnP	7	11	50.73	PHGGVVGRFQVVKVICV	54	M	AB030896.1	1 ... 906
796	OR4AnP	1	11	50.81	LHGGIVGHFQVVGMCV	60	M	AB030896.1	1 ... 906
797	OR4AnP	10	11	50.81	LHGGVVGNFQVVGICV	55	M	AF102522.1	40 ... 660
798	OR4An	0	11	50.73	LHAGVAGHVQFMNGICV	62	M	AB030895.1	1 ... 924
799	OR4An	0	11	50.73	LHGGVVGHVQFVNGICV	57	M	AB030896.1	1 ... 906
800	OR7E42 P	4			MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
801	OR2M3P	2			ITLGCFLDIDALCCMIF	55	M	AF102537.1	16 ... 669
802	OR4H11 P	2	4		MHGCILGHVQLVNSISG	57	M	AF259072.1	104176 ... 105099
803	OR7E57 P	5			MAXGEFLDLHILPAFGL	51	M	AF102536.1	22 ... 669
804	OR2B1P	0	5		LLGAYATNWWLLVVSFHI	78	R	L34074.1	73 ... 1011
805	OR7E34 P	2			MAGGDSLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
806	OR7E56 P	4			MAGDELFFLHILPAFGL	52	M	AF073989.1	547 ... 1515
807	OR3AnP	1	5		LHAGCACNTHALAAMAA	49	M	AF073967.1	2 ... 649
808	OR4H5P	2	5		MHGCILGHVQLVNSISG	56	M	AF259072.1	104176 ... 105099
809	OR1En	0	5		MLGDSLLHLHLIMGILI	82	R	Y07557.1	1 ... 942
810	OR51Cn P	2	11	3	MKTVSYYYIXQ.....	48	M	AF121975.1	50 ... 1012
811	OR2WnP	2	6	30.51	LLGGCVSNIMQALAIIA	64	M	AF102516.1	52 ... 669
812	OR51B1 P	5	11		AHSVSGRSPVRPLITIL	68	M	AF071080.2	15931 ... 16851
813	OR7E81 P	3			MAGGEFFSLHIMPAFGL	54	M	AF102536.1	22 ... 669
814	OR7E44 P	1			MAGGELFDLHIMLAFGL	53	M	AF073989.1	547 ... 1515
815	OR5B7P	2	6		MAATNICNIHELVANIS	47	M	NM_013728. 1	1 ... 948
816	OR7E36 P	4			MAGGELFFLHIMPAFGL	58	M	AF073989.1	547 ... 1515
817	OR2A5	0	7		TMAHCTCLVHLIASILG	74	M	AF102521.1	22 ... 669
818	OR5B1P	2	8		MAATNICNIHELVANIS	47	M	AF146372.1	509 ... 1456
819	OR8B8	0	11	137.68	LLVVSGMGAHCVVVDIV	72	M	AC069559.8	120212 ... 119283
820	OR8B4P	0	11	137.71	LCVNCGVGAHSFVVITL	87	M	AC068910.2 1	133103 ... 132162

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
821	ORnP	15	11	137.77	LCVENRRRTATHCKSHII	35	M	AC069563.9	60295 ... 59327
822	OR8B3	0	11	137.77	LLVICAMGAHCVVVNIV	85	M	AC069563.9	129775 ... 130725
823	OR2Bn	0	6	30.51	LLGSCASNLQWLISFLI	89	R	L34074.1	73 ... 1011
824	OR8B6P	6	11	137.77	LAFFCGLSAHCVA AAVI	73	M	AC069559.8	96224 ... 95292
825	OR8B5P	6	11	137.77	LFFFXGLGAHCVVANTV	73	M	AC069559.8	96224 ... 95292
826	OR4E2	0	14	1.7	LHACIAGHGQLINSISS	90	M	AF259072.1	104176 ... 105099
827	OR8B7P	4	11	137.77	FCVICGWGAHCVA AIFV	71	M	AC069559.8	96224 ... 95292
828	OR11Jn P	3	15	1.82	FSCAGFGSMPLCVSIII	56	M	AF121972.1	171 ... 1109
829	OR4E1P	3	14	1.7	MHACIAGHALLINSISV	92	M	AB030893.1	37 ... 930
830	OR10Dn P	7	11	137.96	.....HHHILLGNVLSI	85	M	AC074177.4	12106 ... 13038
831	ORnP	10	14	1.7	VFRGGFHKFFF.....	23	M	AF102536.1	22 ... 669
832	OR8D2	0	11	137.77	LLVIGVLWVHRLIGNTA	70	M	AC073947.3	29192 ... 30115
833	OR11In P	1	1	126.31	FGAACGCLITLATSVTI	51	M	AL359381.1	175785 ... 176720
834	OR11Jn P	1	15	1.82	FSCACFGWTPLCISIIL	56	M	AF121972.1	171 ... 1109
835	OR10An P	3	11	5.64	MFGVCTPVVQWAGTVVI	74	M	AF247657.1	1 ... 945
836	OR8C3P	5	11	137.77	LCVHCGMGVHCMIVVVV	73	M	AC068905.1 2	76922 ... 75948
837	OR2DnP	6	11	5.64	LLGCCGSVVDFITGILI	62	M	AF073987.1	2 ... 649
838	OR4PnP	0	11	51.03	LHGGIVGHSQL.....	59	M	AB030895.1	1 ... 924
839	OR7E21 P	5			MAGGEFIDLHIMPAFGL	50	M	AF073989.1	547 ... 1515
840	OR2M1	0			IVLGCFLDIYAICSMFL	55	M	AF102537.1	16 ... 669
841	OR7AnP	4	19		NLAGVVMNLQM.....	63	M	AF073970.1	41 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
842	OR5D11 P	1	8		LCVVTTWCTLFTSANES	44	R	AF010293.1	211 ... 1143
843	OR7E50 P	7	8		IVVCDMLDLHVFLDIFL	57	M	AF102536.1	22 ... 669
844	OR7E45 P	3			MAGGELFDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
845	OR7E77 P	6			MAGGEFLDLHIMPAFGL	51	M	AF073989.1	547 ... 1515
846	OR8B2	0	11	137.77	LLVICAMGAHCVVNVIV	84	M	AC069563.9	129775 ... 130725
847	OR8D1	0	11	137.77	LVVVGALSTHALIANTV	87	M	AC073947.3	29192 ... 30115
848	OR8B1P	4	11	137.77	LLVCGMGAHCVVNVIV	84	M	AC069559.8	96224 ... 95292
849	OR7A1P	2	19		MIVVSVVYLQMMTSLGG	72	R	M64376.1	1 ... 999
850	OR7E8P	4	8	13.72	MVACGVLDLHIIDSFGL	53	M	AF102536.1	22 ... 669
851	OR4DnP	7	11	55.86	MHGGVAGHVQLMNNISL	58	M	AC019272.4	183633 ... 182701
852	OR7E80 P	7	8	13.72	MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515
853	OR4DnP	5	11	55.86	MHGGAAAGHVQLMNNLTL	62	M	AC019272.4	183633 ... 182701
854	OR7E10 P	8	8	13.72	IVACDLLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
855	OR10B1 P	3	19	17.91	MLGCCLSVIEMILSVVM	85	M	AC012302.5	54283 ... 55224
856	OR2InP	3			.....LLLLMARILL	75	M	AL078630.1	151152 ... 150391
857	OR4Dn	0	11	55.86	MHGGVGGHAQLMNNVSF	65	M	AC019272.4	183633 ... 182701
858	OR5ACn	0			.VVVVIIHVHLIFGIQP	65	R	AF091575.1	52 ... 663
859	OR2I1	0	6	33.63	LLGSCASNAQLMARILL	79	M	AL078630.1	151152 ... 150391
860	OR10H1	0	19	19.86	MFGFSCGMVAGLVTAL	88	M	AC023604.2	245345 ... 246298

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
861	OR7E59P	5			CPEARVFLHIMPAFGL	53	M	AF102536.1	22 ... 669
862	OR7E28P	4			MAGGELDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
863	OR5B3	0			MVATNGCNIHDLVVNII	51	R	U50948.1	34 ... 978
864	OR2A6	0			TLAHCAFLVPLIACILG	75	M	AF102521.1	22 ... 669
865	OR6Cn	0			.VVVVCAIPPLVMAALI	47	M	NM_010991.1	1 ... 939
866	OR7E54P	5			MAGGEFLDLHIMPAFGL	52	M	AF073989.1	547 ... 1515
867	OR7E48P	3			MAGGEFLDLHIMPAFGL	57	R	AF091580.1	7 ... 663
868	OR67AnP	3	11	76.42	MHSCAGTLPAQGIASL	83	R	AF091561.1	52 ... 663
869	OR4DnP	1	11	55.86	MHGGVAGHVQLMNNLTL	63	M	AC019272.4	183633 ... 182701
870	OR4CnP	1	11	50.91	VHGCILGHAQLNSICS	57	M	AB030896.1	1 ... 906
871	OR4DnP	2	11	55.86	IHGGIAGHVQLMNNVTL	65	M	AC019272.4	183633 ... 182701
872	OR10H2	0	19	19.94	MFGFSCGMVAVGLVMAL	85	M	AC023604.2	245345 ... 246298
873	OR10H3	0	19	19.94	MFGFSWGMVMGLVTAI	75	M	AC023604.2	214343 ... 213396
874	OR55CnP	2	11	2.65	VYLLYLQPGGG.....	45	M	AF121980.1	160 ... 1053
875	OR55BnP	3	11	2.65	.VVVVQLQVPLLMCTVS	53	M	AF121980.1	160 ... 1053
876	OR52VnP	4	11	4.19	LHNHIMVYXFLGTTSP	48	M	NM_013619.1	118 ... 969
877	OR2B3	0	6	33.64	LLGACFINLQLFSILI	75	R	L34074.1	73 ... 1011
878	OR52TnP	6	11	4.22	FGHFLIFLDFLDILTIS	45	M	AF121975.1	50 ... 1012
879	OR2J1P	5	6	33.64	LLGTCASTLHFLMSFVI	57	R	L34074.1	73 ... 1011
880	OR52HnP	3	11	4.19	LHFVSGRVPCLGVPTVT	60	M	AF121975.1	50 ... 1012

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
881	OR2J3	0	6	33.64	LLGTCASNLHFLTSFVI	58	R	L34074.1	73 ... 1011
882	OR52An	0			FHSVS.....VVRLFS	75	R	AF079864.1	632 ... 1576
883	OR4Qn	0			.VVVVAGHMQLVNSLSV	56	M	AB030893.1	37 ... 930
884	OR52Bn P	2	11	4.22	LHFVSVRTSILGVPSVL	60	M	AF121975.1	50 ... 1012
885	OR2N1P	9	6	33.64	LHGGCPIYSEALVCMLV	81	M	AJ132195.1	79 ... 906
886	OR51En P	1			FHSASVRFPLLGAIAMV	90	R	AF079864.1	632 ... 1576
887	OR2J2	0	6	33.64	LLGICAILHFLMSFVI	57	R	L34074.1	73 ... 1011
888	OR2In	0			.....RRRRRRMARILR	77	M	AL078630.1	151152 ... 150391
889	OR2J4P	5	6	33.64	LLGTCASNLHFLTSFVL	56	R	L34074.1	73 ... 1011
890	OR7E40 P	4			MAGGDILDLYILPDFGL	55	M	AF073989.1	547 ... 1515
891	OR2H4P	3	6	33.64	LLGAYLTQIQAMASLLM	63	M	AL078630.1	41097 ... 40165
892	OR7E52 P	5			IVVCDVLDLHVCDIFGL	61	M	AF073989.1	547 ... 1515
893	OR2InP	9			LLGSC.....	80	M	AL078630.1	151152 ... 150391
894	OR6C1	0			LIGVFTVIPALGCATLF	52	M	NM_010991.1	1 ... 939
895	OR7E30 P	3			MAGGEFLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
896	OR5BAn P	0	11	53.69	LVVTSVFNIQNLFVTL	51	R	AF091579.1	7 ... 663
897	OR7H1P	3	19	11.38	MMGGTVLYIQLLVALDV	74	M	AF073989.1	547 ... 1515
898	OR5B2	0	11	54.45	MVATNGCNFHLTSNIF	47	R	U50948.1	34 ... 978
899	OR5AZn P	1	11	53.69	MIGTCTVNLLCILCLIF	48	R	AF091579.1	7 ... 663
900	OR5Bn	0	11	54.45	MVATNGCNIHDLVVNII	51	R	U50948.1	34 ... 978

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
901	OR52Bn	0	11	4.22	KILFSARIPSLGAASTL	64	M	NM_013619.1	118 ... 969
902	OR5BnP	2	11	54.45	MAATNICNIHELVANIS	49	R	U50948.1	34 ... 978
903	OR52Dn	0	11	4.19	MHYASVRIPFLGVAAML	66	M	AF121976.2	474 ... 1307
904	OR7A11	1	19	17.72	MVEASAILDLHMAVLGV	67	M	AF283558.1	1 ... 927
905	OR5BnP	9	11	54.45	MAATSALTVDLLQFFL	41	M	NM_013728.1	1 ... 948
906	OR51AnP	5	11	4.19	THSWFSRMPLLGIVAFV	50	R	AF079864.1	632 ... 1576
907	OR7A15P	4	19	17.72	MIVGSVTHLHMAALGG	74	R	M64376.1	1 ... 999
908	OR7C2	0	19	17.72	IIGCNGIGLETMTVLGF	98	R	AF091580.1	7 ... 663
909	OR7E23P	7	21	20.89	MAGGELFHLQIMPAFGL	57	M	AF073989.1	547 ... 1515
910	OR2E1	8	6	32.05	AHACCTINLQI.RRRRR	43	M	AL078630.1	106872 ... 105934
911	OR1I1	0	19	17.87	MHGTSAIQIHLIFGVGS	57	R	AF091566.1	1 ... 663
912	OR1RnP	3	17	3.12	MVGISAVHLHLIEGVVA	45	R	M64377.1	1 ... 939
913	OR4F3	0	8	0.07	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
914	OR2AEn	0	7	98.7	HLGGCMGNIHIVSSLL	49	M	AC073769.1	143294 ... 142353
915	OR2InP	7			.....TTTTMARILL	72	M	AL078630.1	151152 ... 150391
916	OR52AnP	2			IHSASVRFPLLGXPPPP	94	R	AF079864.1	632 ... 1576
917	OR7C1	0	19		ITGCNGIGLETIATLGI	81	R	AF091580.1	7 ... 663
918	OR2A3P	2	7	149.11	MLAACTCLINLVGGVLG	63	M	AF102521.1	22 ... 669
919	OR7A5	0	19		MIAGNAMYLMITVLGG	74	M	AF283558.1	1 ... 927
920	OR2InP	3			.....MARILL	67	M	AL078630.1	151152 ... 150391
921	OR7A10	0	19		MLVGNAMNLQMAVLGG	76	R	M64376.1	1 ... 999
922	OR2An	0			.....	81	M	AF102521.1	22 ... 669
923	OR2M2	0			IISGFLDIDAICMLF	57	M	AF102537.1	16 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
924	OR7A8P	2	19		MLAVSSLNLQMIATLGG	71	M	AF283558.1	1 ... 927
925	OR2An	0			TSAVCTTLIHL.....	78	M	L14566.1	62 ... 667
926	OR7E20 P	4			MAGGELLFLHIMPAFGL	56	M	AF073989.1	547 ... 1515
927	OR2AnP	3			TLAHTCLVHL.....	65	M	AF102521.1	22 ... 669
928	OR5Bhn P	7			MVASCGGKTVS.....	34	M	Y15525.1	1 ... 705
929	OR1En	0			LMGDSLHLHLIMGISI	92	M	AC068902.1 1	196434 ... 195499
930	OR1EnP	1			MLGDSLHLHLIIGVVL	98	M	AF073976.1	32 ... 649
931	OR5Bn	0	11	54.45	FVITSGCNIHNIVVND	51	R	U50948.1	34 ... 978
932	OR8RnP	12	11	73.74	LFLSYGGGAHH.....	52	M	AC069561.1 0	7848 ... 8783
933	OR5ANn	0	11	55.69	YSGLSGTAFOATLTFGA	55	R	AF091564.1	7 ... 663
934	OR5ANn P	1	11	55.69	YSGLCGTGIQATLTFGT	59	M	Y15525.1	1 ... 705
935	OR5BRnP	8	11	55.69	MSNVC GTVIQATLTFGT	33	M	Y15525.1	1 ... 705
936	OR2A1	0	7	149.18	TLGHCTCLAHLIACFLG	77	M	AF102521.1	22 ... 669
937	OR10An	0	11	6.81	MLGGCFLVQWAGTIIV	54	M	AF247657.1	1 ... 945
938	OR2A9	3	7	149.18	TLAHTCLVHLIACILG	78	M	AF102521.1	22 ... 669
939	OR2A7	0	7	149.18	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
940	OR10A3	0	11	6.81	MLGGCF SVVQWAGTIVV	58	M	AF247657.1	1 ... 945
941	OR10Cn	0	6	33.36	MLGACSCVGHFIATLIC	59	M	AL365336.1	122764 ... 121784
942	OR7A2P	0	19		MVIVSVMNLQVMAALDG	73	M	AF283558.1	1 ... 927
943	OR10Wn P	2	11	54.3	MIGSCASLQLFVAAAI	47	M	AC012302.5	54283 ... 55224
944	OR7A17	0	19		MVGGSAINSQMAALAG	76	M	AF283558.1	1 ... 927
945	OR5Bn	0	11	54.3	MAATNGINIQLISNVF	47	M	AF102528.1	52 ... 669
946	OR5BnP	5	11	54.3	MVATNGCNLRDLMSNV	47	M	AF102528.1	52 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
947	OR1Q1	0	9	106.13	TIAVNMLHLHLIEGVIG	54	M	AF073967.1	2 ... 649
948	OR2Hn	0	6	33.33	LLGTCVMQVQSLSSFVV	88	M	AL078630.1	48786 ... 47851
949	OR7EnP	5	3	90.04	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
950	OR7A14	0	19	17.72	MVIVSAMNI.....	71	M	AC073772.1	227187 ... 226252
951	OR1B1	0	9	106.13	FYGVTLVHLRLIEGLMG	49	M	AC068902.1 1	83719 ... 84647
952	OR12D2	0	6	33.23	LHGSSTIHLHMLVTIAG	81	M	AL359381.1	105330 ... 104407
953	OR7EnP	4	3	11.92	MVACDVLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
954	OR8BnP	5	15	74.31	LXVVEGMAHCVVVNIV	82	M	AC069559.8	96224 ... 95292
955	OR1L1	0	9	106.13	MLGNSLIHLHLVEGVIT	57	M	AC023167.7	60743 ... 61663
956	OR11An	0	6	33.36	FGATCTSVLVLTLSCLI	76	M	AL359381.1	175785 ... 176720
957	OR7AnP	4	12	44.29	....HLLDCYIRTTLSG	55	M	AF102534.1	52 ... 669
958	OR1C1	0	1	254.35	LVVNSGVHLHLIVGLAT	56	M	AC073769.1	133488 ... 132556
959	OR1D2	0	17	2.99	LVVANLLYIHLTLTGIFI	50	M	AF073967.1	2 ... 649
960	OR1L3	0	9	106.13	MLGNSFFHLHLAEGSVA	53	M	AC023167.7	14677 ... 15636
961	OR12Dn P	1	6	33.36	LHGSATIHLHMSTGIAG	76	M	AL359381.1	105330 ... 104407
962	OR4G1P	4	16	83.04	KHGGMAIHSQFVNSISG	47	M	AB030896.1	1 ... 906
963	OR2B4P	1	6	33.53	LLGSCGSNVQLLLGLLM	90	M	AL359352.1	95024 ... 95965
964	OR11H1	0	22		FFGTCLCWIPCLSVIG	61	M	AC027184.3	54955 ... 54017
965	OR4Fn	0	16	83.04	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
966	OR56An P	5	11	4.73	MNLPSFQLPVLOAGFLS	38	M	AF121975.1	50 ... 1012

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
967	OR8NnP	7	4	164.13	REIIRVDAFLKKTANMI	34	M	AF102528.1	52 ... 669
968	OR7EnP	5			MVACDVLDLHIFDFGL	54	R	AF091580.1	7 ... 663
969	OR4Pn	0	11	50.95	LHGGIVGHSQLVNSIAV	56	M	AB030895.1	1 ... 924
970	OR6Cn	0			LIGVFCSTPPLGFATLF	51	M	NM_010991.1	1 ... 939
971	OR5BCnP	2	11	54.3	.....GCQIHFLLANIF	41	M	AC069561.10	51687 ... 50743
972	OR10QnP	4	11	54.3	MLGGCGLLQLLLVSFLV	48	M	AC012302.5	54283 ... 55224
973	OR5BnP	6	11	54.3	TDASNGGNIHELVTNIF	45	R	U50948.1	34 ... 978
974	OR10PnP	2	12	115.61	MIGICTTTTHLVATFII	46	M	AF247657.1	1 ... 945
975	OR1L4	0	9	106.22	MMGNSGIHFRLVETVIT	62	M	AF073967.1	2 ... 649
976	OR2APnP	3	12	115.61	YMGAFLLLLLL.....	49	M	AF073987.1	2 ... 649
977	OR1L6	0	9	106.22	MMGNSGIHFRLVETVIT	63	M	AF073967.1	2 ... 649
978	OR6UnP	6	12	115.61	DIGAFTLFMPDLAALG	52	M	NM_010991.1	1 ... 939
979	OR5C1	0	9	106.06	MAADCAGSVHLLICIQA	50	R	X80671.1	203 ... 1129
980	OR11InP	1	15	70.72	FGAACGCLITLATSVTI	51	M	AL359381.1	175785 ... 176720
981	OR4AnP	6	11	50.78	LYGGVVGHFQVVNGVCV	57	M	AB030896.1	1 ... 906
982	OR4GnP	14	2	114.45	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
983	OR10Vn	0	11	56.15	MVGGCGLLPLLLISVLI	48	M	AL136158.14	29455 ... 30402
984	OR4G2P	2	2	114.45	KHGGMAIHSQFVNSISG	48	M	AB030896.1	1 ... 906
985	OR10VnP	3	11	56.15	MIGRCGLLQLLMVSVLV	45	M	X92969.1	8035 ... 8961
986	OR4F4	0	2	114.45	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
987	OR4G3P	14	19	63.51	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
988	OR5AKnP	4	11	52.82	LGATCSMNINFLVNLCL	65	R	U50948.1	34 ... 978
989	OR10YnP	14	11	56.15	MIRGCGLLFLLLCGHHL	43	M	AF247657.1	1 ... 945
990	OR4GnP	2	19	63.51	KHGGMAIHSQFVNSISG	48	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
991	ORnP	9	5	111.92	IMCSRTTYVXQLHGFFT	23	M	AF073989.1	547 ... 1515
992	OR4Fn	0	19	63.51	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
993	OR8A1	0	11	137.56	LLVICVIGIELVSANIV	61	M	AC069559.8	96224 ... 95292
994	OR8Bn	0	11	137.56	LCVVSGMGAHSVVDVM	66	M	AC069559.8	120212 ... 119283
995	OR6DnP	3	10	47.91	AYVSSLLLRTH.....	55	R	AF034901.1	2110 ... 3078
996	OR7E14 P	7	11	16.31	MAGGELDLHIMPAFGL	58	R	AF091580.1	7 ... 663
997	OR2M4	0			IVLGCALDIVALCCMLF	57	M	AF102537.1	16 ... 669
998	OR4WnP	3	X		LLLLL.....LLFFII	36	M	AC069559.8	73704 ... 74636
999	OR4Fn	0	19	63.51	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
1000	OR7EnP	3			MAGGESLDLHIMPAFGL	57	M	AF073989.1	547 ... 1515
1001	OR4GnP	4	19	63.51	KHGGMAIHSQFVNSISG	47	M	AB030896.1	1 ... 906
1002	OR10Jn P	1			LLGVCGITIQSTISVLL	60	M	X92969.1	8035 ... 8961
1003	OR52En	0	11	4.58	MHTASIRMPLLGNILL	71	M	AF121979.1	53 ... 1106
1004	OR4RnP	24	11		VHGAIMGHVXS FANNCL	54	M	AF102522.1	40 ... 660
1005	OR4Cn	0	11		AHGAIVGHIQFVNSICL	75	M	AF102522.1	40 ... 660
1006	OR4AnP	10	11		GLGGIVGHIQL.....	44	M	AF102522.1	40 ... 660
1007	OR4AnP	4	11		LHGGVAGHFQVVNGGCI	55	M	AB030895.1	1 ... 924
1008	OR4AnP	8	11		LHGGVAGHSHSVNGICV	54	M	AF102522.1	40 ... 660
1009	OR9Gn	0	11	52.54	FAAYCVGNIIKMLLNVC	46	M	AC074177.4	106297 ... 105361
1010	OR10An	0	12	59.65	MFGSCGSVLQWASTFIF	64	M	AF247657.1	1 ... 945
1011	OR4Cn	0	11		VHRGVVGHIQFINSICL	73	M	AF102522.1	40 ... 660

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1012	OR10Vn P	8	11	56.15	.FFFFIIXNEXSVVVLV	37	M	AC073945.4	110931 ... 111893
1013	OR10Un P	3	12	59.65	MAGLCATVAQLMLSFIS	56	R	AF034898.1	1 ... 981
1014	OR7E2P	3	11	90.37	MVACDVLDLHICDIFGL	59	M	AF073989.1	547 ... 1515
1015	OR7E35 P	6	4	11.87	MAGGEFLDLHIVPAFVL	53	M	AF102536.1	22 ... 669
1016	OR9KnP	0	12	59.71	LAIVGGCSLQVLSIIP	49	R	AF091579.1	7 ... 663
1017	OR7E13 P	5	11	90.37	MAGGEFLDLHIMLAFGL	54	R	AF091580.1	7 ... 663
1018	OR7EnP	4	8	6.5	MLACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
1019	OR9Kn	0	12	59.71	LAIVGGCSIQMSLSIIP	49	M	NM_013728. 1	1 ... 948
1020	ORnP	13	11	137.56	PCVIYGIDVHSLXEPAY	34	M	AC069559.8	36251 ... 35322
1021	OR7EnP	8	11	72.11	MAGGNLFFSLLMPAFGL	54	M	AF073989.1	547 ... 1515
1022	OR7EnP	5	3	140.64	MAGGKFLDLHIMPAFGL	53	M	AF073989.1	547 ... 1515
1023	OR3A4P	0	17	3.12	LHAGCMFNTQALAAMGA	44	M	AC073769.1	133488 ... 132556
1024	OR8QnP	9	11	137.56	LSIIIIVETEFVFTXIVT	33	M	AC069559.8	137090 ... 138039
1025	OR7EnP	2	11	72.11	ILACGVLDLHIMHNFGGL	55	M	AF073989.1	547 ... 1515
1026	OR7EnP	3	3	140.64	MVACGVLDLHIIHSFGL	56	M	AF073989.1	547 ... 1515
1027	OR3A1	0	17	3.07	LHVGCACNTHALVGMAT	50	M	AF073967.1	2 ... 649
1028	OR5Gn	0	11	52.52	MGEACGMSTHFLLAIGL	69	M	AF146372.1	509 ... 1456
1029	OR5MnP	7	4	42.45	LIIIIYVYNAQRIIIMLE	39	M	AF073987.1	2 ... 649
1030	OR7EnP	1	3	136.02	MVACDVLDLHIIDNFGGL	54	M	AF073989.1	547 ... 1515
1031	OR5G1P	2	11	52.51	QGVACGINTHNVVAVGF	68	M	AF146372.1	509 ... 1456
1032	OR5PnP	3	11	6.93	LVGTCAGNSFCPSSVLS	70	M	AF121977.1	262 ... 1197

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1033	OR10AEnP	8	1	157.36	IIIIIGIMVIVQIHCVV	40	M	X92969.1	8035 ... 8961
1034	OR3A2	0	17	3.07	LHAGCACNTHALVGMAT	50	M	AC073769.1	133488 ... 132556
1035	OR10Jn	0	1	157.4	MVATCGIMLHANVSVIV	88	M	X92969.1	8035 ... 8961
1036	OR1D3P	2	17	2.94	LVVANLFYIHLTGIFI	50	R	Y07557.1	1 ... 942
1037	OR10Jn	0	1	157.36	TVAICGIMVQSNVRVIV	72	M	X92969.1	8035 ... 8961
1038	OR1D4	0	17	2.99	LVVTNLLYLLLLTGIFT	49	R	Y07557.1	1 ... 942
1039	OR5GnP	8	11	52.51	QGVVYVANTHAVVAVLV	55	M	NM_013728.1	1 ... 948
1040	OR4SnP	1	11	50.99	LHGCIGGHIQLVNSIAG	61	M	AB030895.1	1 ... 924
1041	OR5GnP	4	11	52.51	LGVVCGVSTHFLVLGL	75	M	AF146372.1	509 ... 1456
1042	OR9HnP	2	1	254.35	FSGIAGWNAQMLLCIIS	59	R	AF091579.1	7 ... 663
1043	OR1A1	0	17	2.99	MIGNSGINPHLMGVIFV	86	M	AF073966.1	41 ... 643
1044	OR1A2	0	17	2.99	MIAKSGISPHMLGVFL	80	M	AF073966.1	41 ... 643
1045	OR8AnP	6	11	137.68	FLVICVMVIELVFANLI	50	M	AC069561.10	51687 ... 50743
1046	OR1P1P	1	17	2.99	LLGDIALLTRLLLGVII	82	M	AF102538.1	139 ... 675
1047	OR7E12P	7	11	1.92	MAGGEFFSLHIMPAFGL	55	M	AF073989.1	547 ... 1515
1048	OR4A1P	4	11		LHGGVVGHFQVVGICV	57	M	AB030896.1	1 ... 906
1049	OR10G3	0	14	1.7	LHGSCGAHLQLTDIVVS	91	M	AF259072.1	19582 ... 18644
1050	OR10G1P	3	14	1.7	LHGSCGAHIQLTDIVAS	93	M	AF259072.1	55611 ... 54658
1051	OR10G2	0	14	1.7	LHGSCGAHIQLTDVVAS	91	M	AF259072.1	55611 ... 54658
1052	OR5Tn	0	11	51.94	MVGTCAAHIHALFVIEV	52	M	AF121977.1	262 ... 1197
1053	OR7EnP	8	3	136.02	MVACGVLDLHIIGSFGL	53	R	AF091580.1	7 ... 663
1054	OR7EnP	5	3	136.02	MAGGKFLDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
1055	OR4AnP	2	11	50.93	LHAGVVGHVQFMNGICV	61	M	AB030895.1	1 ... 924
1056	OR4C1	1	11	50.93	LHGGIIGHVQFVNSMCL	66	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1057	OR1EnP	7	17	2.9	.....MMMYTLIMGILI	80	M	AF073961.1	32 ... 649
1058	OR7KnP	11	14	5.99	MIGCNFIELYMMIGIFG	49	R	AF091580.1	7 ... 663
1059	OR4CnP	3	11	50.93	LHDGIEGHIQFVNSMCA	61	M	AF102522.1	40 ... 660
1060	OR1RnP	11	17	2.9	MVGISAVHLHLIEGVVA	44	R	M64377.1	1 ... 939
1061	OR5AUn	0	14	1.22	MAATCGANIHCFLFANLS	51	M	AC069559.8	85584 ... 84655
1062	OR4Cn	0	11	50.96	LHAGVVGHIQFVNSICI	69	M	AF102522.1	40 ... 660
1063	OR4Cn	0	11	50.96	VHGCIVGHVQLLSICV	57	M	AB030895.1	1 ... 924
1064	OR13Dn P	2	9	86.89	MLGSCWITLRLFTVIVL	58	M	AJ251154.1	2703 ... 1747
1065	OR5n				ASASLTSYVHNREEVFV	44	M	AL359352.1	111313 ... 112242
1066	OR2Hn				LLGTCVMQVQSLSSLVV	83	M	AL078630.1	48786 ... 47851
1067	ORn				.....	25	M	AC074177.4	88434 ... 88916
1068	ORn				.....EINLLLARGKAL	29	M	AF283814.1	1 ... 930
1069	ORn				NNNNNFEXSLHCCCILI	29	M	AC074177.4	128803 ... 129726
1070	ORn				TLLLLTFQHHL.....	27	M	L14569.1	62 ... 667
1071	OR6Fn				..CCCWPIPTSAIAVIS	46	R	M64386.1	130 ... 975
1072	ORn				.....ILLLLL	33	R	U50947.1	418 ... 1350
1073	ORn				..CCCLIPFFFTSGYSW	24	R	M64392.1	1 ... 942
1074	OR10An				PLGECDPPEEQMYVGLVM	51	M	AF247657.1	1 ... 945
1075	ORn				IPNASRRRRRR....PP	25	R	M64388.1	1.... 942
1076	OR2Ln				FLAGAGINAHYVSTFLF	51	M	AF102527.1	22 ... 669
1077	OR10Jn				LTGICGIMVQSNVSVLL	57	M	X92969.1	8035 ... 8961
1078	OR1Kn				LLLLLMVNLYLIKGVVT	50	R	M64377.1	1 ... 939
1079	OR10Dn				LHGSCGLHILLSNVISG	69	M	AC074177.4	12106 ... 13038
1080	ORn				.....CCCIII	41	R	M64376.1	1 ... 999

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1081	OR2Ln				SLACGGLNAHFVRTLSF	52	M	AF102537.1	16 ... 669
1082	ORn				HHHHHRLESSLLLLLL	38	M	AC073945.4	152209 ... 153150
1083	ORn				.....LLLLLS	27	M	AL365336.1	41087 ... 41711
1084	OR2n				.....GGGGGG	57	M	AF102521.1	22 ... 669

5 Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be apparent to those skilled in the art that various changes and modifications can be practiced without departing from the spirit of the invention. Therefore the foregoing descriptions and examples should not be construed as limiting the scope of the invention.

10

All patents, patent applications, and publications cited herein are hereby incorporated by reference in their entirety. In particular, the following documents are hereby incorporated by reference in their entirety: United States Provisional Patent Applications Serial Nos. 60/145,412, filed July 23, 1999; 60/155,126, filed September 22, 1999; 60/158,495, 15 filed October 8, 1999; 60/158,615, filed October 8, 1999; 60/181,113, filed February 8, 2000; 60/181,115, filed February 8, 2000; 60/184,809, filed February 24, 2000; 60/188,332, filed March 9, 2000; and United States Patent Applications Serial Nos. 09/620,753, filed July 21, 2000; and 09/621,122, filed July 21, 2000.

CLAIMS

What is claimed is:

- 5 1. An isolated and purified polynucleotide sequence encoding an olfactory receptor and having the nucleotide sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a nucleotide sequence that is at least about 95% homologous to a nucleotide sequence of the group consisting of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through
10 SEQ ID NO:152 and encoding a polypeptide having olfactory receptor function.
2. An expression vector comprising a polynucleotide sequence of claim 1.
3. A host cell comprising the expression vector of claim 2.
- 15 4. An isolated and purified olfactory receptor polypeptide comprising the translated sequence of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of the translated sequence of SEQ ID
20 NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152 and having olfactory receptor function.
5. A host cell expressing a polypeptide of claim 4 or a functional fragment thereof.
- 25 6. A phage expressing a polypeptide of claim 4 or a functional fragment thereof.
7. A preparation containing a polypeptide of claim 4, further comprising
30 biological or synthetic molecules which maintain the functional structure of the polypeptide.

8. An isolated and purified polynucleotide sequence encoding an olfactory receptor and having the nucleotide sequence selected from the group consisting of SEQ ID NO: 153 through SEQ ID NO: 1084 or a nucleotide sequence having a sequence at least about 95% homologous to a nucleotide sequence of the group consisting of SEQ ID NO: 153 through SEQ ID NO: 1084 and encoding a polypeptide having olfactory receptor function.
9. An expression vector comprising a polynucleotide sequence of claim 8.
10. A host cell comprising the expression vector of claim 9.
11. An isolated and purified olfactory receptor polypeptide comprising the sequence of SEQ ID NO: 1085 through SEQ ID NO: 2008, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of SEQ ID NO: 1085 through SEQ ID NO: 2008 and having olfactory receptor function.
12. A host cell expressing a polypeptide of claim 11 or a functional fragment thereof.
13. A phage expressing a polypeptide of claim 11 or a functional fragment thereof.
14. A preparation containing a polypeptide of claim 11, further comprising biological or synthetic molecules which maintain the functional structure of the polypeptide.
15. A library of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising the expression products of at least two polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

16. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 50 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through
5 SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

17. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 100 polynucleotides of SEQ ID NO:1 through
10 SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

18. A library of olfactory receptors according to claim 15, wherein the library
15 comprises the expression products of at least 200 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

19. A library of olfactory receptors according to claim 15, wherein the library
20 comprises the expression products of at least 500 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

20. A library of olfactory receptors suitable for determining the interaction
25 pattern of a composition with the receptors, comprising at least two polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008, wherein said polypeptides are functional olfactory receptors; or functional fragments of said polypeptides.

21. A library of olfactory receptors according to claim 20, wherein the library
30 comprises at least 50 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,

wherein said polypeptides are functional olfactory receptors; or functional fragments of said polypeptides.

22. A library of olfactory receptors according to claim 20, wherein the library
5 comprises at least 100 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,
wherein said polypeptides are functional olfactory receptors; or functional fragments of
said polypeptides.

23. A library of olfactory receptors according to claim 20, wherein the library
10 comprises at least 200 polypeptides of SEQ ID NOS of SEQ ID NO: 1085 through SEQ
ID NO: 2008, wherein said polypeptides are functional olfactory receptors; or functional
fragments of said polypeptides.

24. A library of olfactory receptors according to claim 20, wherein the library
15 comprises at least 500 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,
wherein said polypeptides are functional olfactory receptors; or functional fragments of
said polypeptides.

25. A method for determining the binding pattern of a composition with
20 olfactory receptors, comprising the steps of:
exposing the composition to a library according to claim 21; and
determining whether the composition binds to each olfactory receptor, thereby
determining the overall binding pattern of the composition.

26. The method of claim 25, wherein the composition consists essentially of one
25 compound or chemical.

27. The method of claim 25, wherein the composition comprises at least two
30 compounds or chemicals.

28. The method of claim 25, wherein the step of determining whether the
composition binds to each olfactory receptor further comprises a determination of the

approximate binding constant with which the composition binds to each receptor or functional fragment thereof.

29. The method of claim 25, further comprising the step of determining whether
5 a receptor or functional fragment thereof to which the composition binds is activated.

30. The method of claim 29, further comprising the step of determining the absolute or relative amount by which the receptor or functional fragment thereof is activated.

10

31. A DNA array or a DNA chip comprising DNA segments derived from SEQ ID NO: 153 through SEQ ID NO: 1084.

32. A method of determining differences among individuals with respect to their
15 olfactory faculties, comprising the steps of comparing the olfactory DNA of the individual against the array or chip of claim 31.

33. A method to determine single nucleotide polymorphisms in olfactory receptors, comprising the steps of uniquely amplifying olfactory receptor sequences from DNA
20 obtained from one or more individuals, based on primers designed according to the first 25 bases and the last 25 bases of any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084, and determining the similarities and differences between said amplified DNA and the corresponding receptor from SEQ ID NO: 153 through SEQ ID NO: 1084.

FIGURE 1

SEQ. ID NO:1

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1  GGNTTATNCC  NCGTTGNACT  GCAGGGGNNC  AACNCACAGN  ACGCCCGNTG  CTGAGGCTAT  AAATGANCGG
71  NTTAAGGAGA  GGAGTGAAGA  CAGTAAAAAA  ACACAGAGAT  AAATTTATCA  ATTGGGAAGC  TTTCAAAGGG
141 CCAAATATAG  ATGAATATTA  ATGGGCCAAA  GAAGAGAAGC  ACAACAGTAA  TGTGGGCAGA  CAGAGTGGAA
211 AGGGCCTTGG  ACATCCCATC  AGAGGCTTGG  CGATGCACAG  TAGCAAGGAT  GATAGTGTCA  GAAATGAGCA
281 AAAGGAGGAA  ACACATAAGT  GAGAGCAGAC  CACTGTTAGT  GAGCACCAGT  ATCTCAAAAC  CATAGGTGTC
351 TAAGCAGGCA  AGCTTGATCA  CTAGGAGGAG  GTCACAGAAA  AAATTGTCTA  CCCTGTTGGG  TCCACAGAAA
421 GGCAGATTGA  CTTTGAATGC  CAGGTGGGTG  GCTGAGTGTG  AGATGCCAAT  GGCCAGGAA  ACCCCACCA
491 GAACAGTTCA  CACCTCCGG  TTCATGATGG  TTATGTAGTG  CAGAGGTTTG  CATATAGCAA  TGTATCTATC
561 ATAGGCCATG  GCAACAAGAA  GCACCATCTC  ACTACCCCA  AAAACATGCA  AGN

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SEQ. ID NO:2

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1  GGNNTNTNAC  ACGGACTCCA  AGCAGTGGTA  ACAACGCAGA  GTACGCCCGT  TCCTGAGTGA  GTAGATGAAG
71  GGGTTCAGCA  TGGGATTGAT  GACAGTGTTG  AAAATTCCAA  CAGCTTTATC  CTTGTCTGAA  AGCTTGGTTG
141 AACCCAGTCG  CATATAGTTA  AAGATACCTG  AACCATAGAA  TATGGCAACC  ACAGTGAGGT  GGGAGCCACA
211 TGTGGAGAAG  GCTTCTTCC  TGCCCTCTAC  AGAGCGAATT  CGCAGGACTG  CAGCTGCCAC  GTGGATATAG
281 GAGATGACAA  TGAGAGCCAT  GGGGGTACCT  GCCATTATAA  AACCACAGC  AAAAAGCAGC  AGCTCATTGA
351 GTTGGGTGCT  GGAGCAGGAG  AGCTGGAAGA  GCTGTGGGAG  GTCACAGTAG  AAGTGATTGA  TCACATTGGG
421 GCCACAGAAG  TTGAGCGTGG  ACATGGCCAC  AGTGTGGGTC  AGTGCCTTGG  TGAAAGCACA  AGCCAGGAC
491 GCAGCCACCA  ACATCCTCTG  GACTGTCTGA  CTCATGCGGG  TGCTTGTAGG  TGAGGGGGCC  GGCAGATGGG
561 CAGGAATCGG  TCATAGGG

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SEQ. ID NO:3

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1  TGGNNTTTTA  TCNCCNTTGG  AGCTCCNAAG  CAGTGGTAAC  AACGCAGAGT  ACGCCCGTTG  CGAAGCGTGT
71  AGATTAGGGG  GTTCAGTAGG  GGAGTGATGA  CAGTGTAGGT  CACCGAGATC  AGCTGGTCAT  GTTCTCTGGT
141 GTTCTCTGAC  TTGGGCTTGA  GGTAGGCAAT  GGAGGCACAG  CTGTAGTGG  CAATGACCAC  AGTGAGGTGG
211 GATGCACAGG  TGGCAAAAGC  CTTCTTCCGG  CCTCAACTG  AAGTAATCTT  GAGGATTGTA  GAGATAATGA
281 GAACATAAGA  AATGAAAACC  AGACCCATAG  GTACAACAAG  CACCAGCACA  CTGATAATCA  AAGTCAGGAT
351 TTCATTGACA  GTGGTGTCAA  TGCAGGAGAG  CTTCATCACA  GGGCGGATGT  CACAGAAGAA  GTGGGGCACC
421 TTTTCTAGCA  CAGAAGGGTA  ACCTGAATAC  AGATGTCACT  TGCGTTATTG  CTACAATCAG  CCCAATGCTG
491 CAAGGCCCCC  AGGACAAAGT  GGATACGCAG  CCTCTTGTTT  ATAATAACCA  TGTATCTCAA  GGGGGTTGCA
561 AGATGGCCAC  ATAGCNGNTC  ATATTCCN

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SEQ. ID NO:4

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1  GTNGTTNTTA  ACNCCATTGG  AGCTCCAAAG  CAGTGGTAAC  AACGCAGAGT  ACGCCCCCAA  TGTATTTTTT
71  TTTGAGAAAC  TTGTCTTTCT  TAGATTTTTG  TTACATCTCT  GTCACAATTC  CAAAATCTAT  TGTTAGTTCC
141 TTGACTCATG  ATACTTCCAT  TTCTTTCTTT  GGGTGTGCTC  TGCAAGCCTT  CTTTTTCATG  GACTTGGCAA
211 CTACGGAGGT  AGCCATCCTT  ACAGTGATGT  CCTGTGACCG  CTATATGGCC  ATCTGCCGGC  CTTTACATTA
281 TGAGGTCATC  ATAAACCAAG  GTGTCTGTCT  GAGGATGATG  GCCATGTCGT  GGCTCAGTGG  GGTGATCTGT
351 GGATTTCATG  ATGTGATAGC  AACATTCTCA  TTACCATTCT  GTGGGCGCAA  TAGAATACGT  CAATTTTTCT
421 GTAATATTCC  ACAACTNCTA  AGCCTCTTAG  ACCCAAAGT  AATTACCATT  GAGATTGGAG  TCATNGGNTT
491 TTGGTACAAG  TCTTNGATA  ATCCTCTTTG  NTGNAATTAC  TCTCTCCTAC  ATGTNCATTT  TTTTTTGNCA
561 TCATGAGGGA  TTCCTTCTAA  AGG

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SEQ. ID NO:5

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1  GNGGNTTNTT  NCCNCCNTTG  GACTCCAAAG  CAGTGGTAAC  AACGCAGAGT  ACGCCCGTGT  GTAAATGAAT
71  GGGTTCAACA  TGGGAGTCAT  AACAGTGATG  GACAATGATA  GCAGCTTCGT  GCCCTCAGGT  GAATTATTTG
141 ATTTAGGCCG  GAAGTAGGTG  AGGCTTAATG  ATATATAGAA  AAGAGAGACA  ACAAGGAGGT  GTGAGGAACA
211 TGAGAAAAG  GCTTTATTCT  TCCCTTTAGC  TGATGGGATC  TTGAGGATGG  CAGCAGCAAT  GCGAGTATAG
281 GAACACAAGA  TCAGCAAGCA  GGGGATCATG  ACCACCAGAA  TGGTTCCGAC  GATGGCGTAG  ATCTCAAACA
351 GTGCTGTGTC  TGCACAGACC  AGCCTCAGCA  CAGGTGGGCT  GTCACAGAAG  AAGTGTTTCA  CCTTGTGGT
421 GCCACAGAAT  GGAAACTGA  AGAGCCATGT  GGTCTGCACA  GTAGCTACAG  GAAAGCCTGG  GAACCAGGAG
491 GCAGCAGCCA  GTTTGGCAGC  AGTCCTTTGG  TTCATGATGA  CTGGGTAGTG  CAAGGGACTN  GCAGATNNNC

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561 NCATTCCGGTC ATATGNCATG GNAG

SEQ. ID NO:6

1 CNTTGGAGCT CCAAAGCAGT GGTAACAACG CAGAGTACGC CCGCTCCGCA GAGAATAGAT GAAAGGGTTC
71 AGGGTCGGGG GCACGACTGT GTAGAACGCA GACAGGAAAA CATCCAGAAC GGGGGGAGAA TTTGAAATTG
141 GCTTCACATA GGCAATGCTG CCAGATATCA TAAAGAGTGT TACAACCACA AGATGTGGAA TGCAGGTAGA
211 AAATGTTTTT GATCTACCTT CCTTAGAAGG AATCCTCATG ATGACAGAAA AAATGTACAT GTAGGAGAGA
281 GTAATTACAA CAAAGGAGAT TATCACAAGA CTTGTACCAA AAACCATGAC TCCAATCTCA ATGGTAATTA
351 CTTTGGGGTC TAAGAGGCTT AGGAGTTTGT GGAATATTAC AGAAAAATTG ACGTATTCTA TTGCGCCAC
421 AGAATGGTAA TGAGAATGTT GCTATCACAT GCATGAATCC ACAGATCACC CCCTGAGCC ACGACATGGC
491 CATCATCCTC AGACAGACAC CTTGGTTTAT GATGACCTCA TAATGTAAAG GCCGGCAGGA TGGCCATATA
561 GCGGTCATAG GA

SEQ. ID NO:7

1 GCAGTGGTAA CAACGCAGAG TACCGCCCCC TATGTACTTT TTCTTGGGAA ACTTGTCTGT GTTTGACATG
71 GGTTCCTCCT CAGTGAATG TCCCAAAATG CTGCTCTACC TTATGGGGCT GGGCCGACTC ATCTCCTACA
141 AAGACTGTGT CTGCCAGCTT TTCTTCTTCC ATTCCTCGG GAGCATTGAG TGCTTCTTGT TTACGGTGAT
211 GGCCTATGAC CGCTTCACTG CCATCTGTTA TCCTCTGCGA TACACAGTCA TCATGAACCC AAGGATCTGT
281 GTGGCCCTGG CTGTGGGCAC ATGGCTGTTA GGGTGCATTG ATTCCAGTAT CTTGACCTCC CTCACCTTCA
351 CTTTGCCACA CTGTGGTCCC AATGAAGTGG ATCACTTCTT CTGTGACATT CCAGCACTGT TGCCCTTGGC
421 CTGTGCTGAC ACATCCTTAG CCCAGAGGGT GAGCTTCACC AACGTTGGCC TCATATCTCT GGCTGCTTTC
491 TGCTAAATCT TTTATCCTAC ACTAGAATCA CAAATATCTA TCTTAAGCAT TCGTACAAC

SEQ. ID NO:8

1 GGAACAACGC AGAGTCGCCC CCGATGTACT TGTTCCTCTC CAACCTGTCC TTTGCTGACA TTTGTGTTAC
71 TTCCACCACC ATTCCAAAAA TGCTGATGAA CATCCAGACA CAGAACAAG TCATCACCTA CATAGCCTGC
141 CTCATGCAGA TGTATTTTTT CATACTCTTT GCTGGATTG AAAACTTCCT CCTGTCCGTG ATGGCCTATG
211 ACCGGTTTGT GGCCATCTGT CACCCCTGCG ACTACATGGT CATTATGAAC CCTCACCTCT GTGGACTGCT
281 GGTTCTGGCA TCCTGGACCA TGAGTGCTCT GTATTCCTTG CTACAAATCT TAATGGTAGT ACGACTGTCC
351 TTCTGCACAG CCTTAGAAAT CCCCCACTTT TTCTGTGAAC TTAATCAGGT CATCCAACCT GCTTGTCTCTG
421 ATAGCTTTCT TAATCACATG GTGATATATT TTACAGTTTG CGCTGCTGGG TGGAGGTCCC TGACTGGGAT
491 CCTTTACTTC TTACTCTAAG ATAATTTCTT CATACTGCA ATCTCANCA GNTCAGGG

SEQ. ID NO:9

1 GGGTTTTNAC CCNNTNGGAG CTCCNAGCAG TGGTAACAAC GCAGAGTACG CCCGTTTCGT AGGCTATAAA
71 TGAAGGGGTT GAGTGAGGGA GTCAACACTC CATAGAAGAG GGCCATGAAC TTGGGTTGAT CCCTTGAGAT
141 GGAGGAGGGG GGCTGAAGGT ACATGCTGAT GGCTGGGCCA TAAAATAAGA AAATAACAAT AAGATGGGAG
211 GAGCATGTCC CAAAGGCCTT TNTCCTTCCC TTGGAAGATT TGATCTTAAA TACAGCACTT NCAATACTAG
281 CATAGGAAGC AAGAATTAAG CATANTGGGA CAGCTAACAT AAAAATGCAT ACCACAGAGA GTGTGAGCTC
351 GTTAGAACCC TTTTCACCAC AGGCAATCTT TATCAGAACA GGAATCTCAC ACACCAAGTG GTCCAGCTTA
421 TTGAGACCAC ACAGTGGNAA TTTGTATTGT GGCAGTGGCC CTCTGAGAAC GGCATAGATT ATACCAANTT
491 AACCACNACN GCGGNAACTA ANGATTGAGA CGCNCCTGGAT TCATGATGAG GGTNTAGTGA AGAGGTTNTC
561 AGAATGGCCA CATACCGNTC AAA

SEQ. ID NO:10

1 GCTGCTNCCA GCAGTGGTAA CAACGCANAG TACGCCCCCA ATGTATTTGT TCTTCGGCCA TCTGTCTCTC
71 CTGGATGTCT GCTTCATCAC CACTACCATC CCACAGATGT TGATCCACCT CGTGGTCAGG GACCACATTG
141 TCTCCTTTGT ATGTTGCATG ACCCAGATGT ACTNTGTCTT CTGTGTTGGT GTGGCCGAGA GCATCCTCTT
211 GGCTTTTCATG GCCTATGACC GNTATGNTGC TATCTGCTAC CCACTTAACT ATGTCCCGAT CATAAGCCAT
281 AAGGTCTGTG TCAGGCTTGT GGGAACTGCC TGGNTCTTTG GGCTGATCAA TGGCATCTTT NTCGGGTATA
351 TTTTATTCTT AGAGCCCTTC CGCAGAGACA ACCACATAGA AAGCTTCTTC TGCGAGGCC CCATAGTGAT
421 TTGGCCTCTT TTGTGGGGGA CCCTNANANT AGTCTGTGGG CAAATCTTTN GCCGATGCCA TCGTGGTAAT
491 TCTNAGNCCC ATNGGTGCTN ACTGNTACTT ACCTATNTGC ACATTCTCTG CCACCATCCT AGNNAAAGTC
561 CTCCTTCTN

SEQ. ID NO:11

1 GGNNTTTTAC CNCNATTGGA GCTCCAAAGC AGTGGTAACA ACGCAGAGTA CGCCCCCTAT GTACTTGTTT
71 TTAGAAACT TGTCTTTCTT AGATTTTTGT TACATCTCTG TCACAATTCC AAAATCTATT GTTAGTTCCCT
141 TGACTCATGA TACTTCCATT TCTTTCTTTG GGTGTGCTCT GCAAGCCTTC TTTTTCATGG ACTTGGCAAC
211 TACGGAGGTA GCCATCCTTA CAGTGATGTC CTATGACCGC TATATGGCCA TCTGCCGGCC TTTACATTAT
281 GAGGTCATCA TAAGCCAAGG TGTCTGTCTG AGGATGATGG CCATGTCGTG GCTCAGTGGG GTGATCTGTG
351 GATTTCATGA TGTGATAGCA ACATTCTCAT TACCATTCTG TGGGCGCAAT AGAATACGTC AATTTTTCTG
421 TAATATTCCA CAGCTCCTAA GCCTCTTAGA CCCCAGAGTA ATTACCATTG AGATTGGAGT CATGGTTTTT
491 GGTACAAGGC TTNGGATAAT CTNCTTTGGT GNAATTACTC TCTCCTACAT GTACATTTTT TCTGCATCAT
561 GAGGATTCCCT TCTAAGGAGG GG

SEQ. ID NO:12

1 GGNNTTGACC ACGGAGCTCC AAGCAGTGGT AACAACGCAG AGTACGCCCT CTTGTCTCTG TGCCGATACA
71 TGATGGGGTT CAACATGGGA GTCATAACAG TGTAGGACAA TGATAGCAGC TTCTTGCCCT CAGGTGAATT
141 ATTTGATTTA GGCCGGAAGT AGGTGAGGCT TAATGATATA TAGAAAAGAG AGACAACAAG GAGGTGTGAG
211 GAACATGTAG AAAAGGCTTT ATTCTTCCCT TTAGCTGATG GGATCTTGAG GATGGCAGCA GCAATGTGAG
281 TATAGGAACA CAAGATCAGC AAGCAGGGGA TCATGACCAC CAGAATGGTT CCGACGATGG CGTAGATCTC
351 AAAGAGTGCT GTGTCTGCAC AGACCAGCCT CAGNACAGGT GGGCTGTGAC AGAAGAAGTG GTTCACCTTG
421 TTGGTGCCAC AGAATGGAAA ACTGAAGAGC CATGTGGTCT GCACAGTAGC TACAGGAAAG CCTGGGAACC
491 AGGAGGTAGC AGCCAGTTTG CACGAGTCCC TTTGGTTNAT GAATGACTGG GGTAGTGCAA GGGACTGCAG
561 ATGGCCACAT ANCGGTCNT

SEQ. ID NO:13

1 GNNNTTNNNN CCACTGGAGC TCCAAAGCAG TGGTAACAAC GCAGAGTAGC CCCCCAATGT ATTTATTCTT
71 GCTCACCTCT CCTTAGTTGA TATCTGTTTT ACCACCAGTA TTGTCCCCCA GCTGCTGTGG AACCTAAAAG
141 GACCTGACAA AACAATCACA TTCCTGGGTT GTGTCATCCA GCTCTACATC TCCCTGGCAT TGGGCTCCAC
211 TGAGTGTGTC CTCCTGGCTG TAATGGCTTT TGATCGCTAT GCTGCAGTTT GCAAACCTCT CCACTATACC
281 GCCGTAATGA ACCCTCAGCT GTGCCAGGCT CTGGCAGGGG TTGCGTGGCT GAGTGGAGTG GGAAACACTC
351 TTATCCAGGG CACTGTCACC CTCTGGCTTC CTCGCTGTGG ACACCGATTG CACTAACATT TCTTCGTGAG
421 GTACCCTCCA TGATTAAAGCT TGCATGTGTG GACATCCATG ATAATGAGGT TCAGCTCTTT GTTGCTTCAC
491 TGGTCTTGCT CCTCTTGCCC TTAGTGCTAA TACTGCTGCC TATGGACATA TAGCCAAGGT GGCATAAGGA
561 TCAAGTCAGT CCAGCCT

SEQ. ID NO:14

1 GGNNTNTNAC TCCATGGACT CCAAGCAGTG GTAACAACGC AGAGTACGCC CATACTGAT GGGGTTCACT
71 AGGGGAGTGA TGACAGTGTA GGTACCGAG ATCAGCTGGT CATGTTCTCT GGTGTTCTCT GACTTGGGCT
141 TGAGGTAGGC AATGGAGGCA CAGCTGTAGT GGACAATGAC CACAGTGAGG TGGGATGCAC AGGTGGCAAA
211 AGCCTTCTTC CGGCCCTCAA CTGAAGCAAT CTTGAGGATT GNAGAGATAA TGAGAACATA AGAAATGAAA
281 ACCAGAGCCA TAGGTACAAC AAGCACCAGC ACACTGATAA TCAAAGTCAG GATTTTCATTG ACAGTGGTGT
351 CAATGCAGGA GAGCTTCATC ACAGNGCGGA TGTCACAGAA GAAGTGGGGC ACCTTTCTAG CACAGAAGGG
421 TAACCTGAAT ACAGATGTCA CTTGCGTTAT TGCTACAATC AGCCCAATGC TGCNGGCCCC CAGGACAAGT
491 TGGATACGCA GCCTTNTCGT TCTANTAACC ATGTATCTCA ANGGGCTTGC NGATNNCCAC ATACTNGCAT
561 ANACCATTCG TGNGAGC

SEQ. ID NO:15

1 GNCGNTNTTA ACNCCATTGG AGCTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCATTA CGAAAAGTGT
71 AGATGAAGGG GTTCAAGAGG GGTGTGATGA TGCAGCTCAG GACGGAGGCA CCTTTGTTGA GCAGTTTGGG
141 CTGAGCCTCT GACATACGAA TGTAAGAGAA GATGGAAGT CCATAGATGA TGACCACCAC TGTAAGATGC
211 GAGGCGCAAG TGGAAAACGC TTTCTTTCGC TCAGCAGCTG TAGGGGCCCT GAGAACAGTG GCAAGAATGC
281 AGGCATAGGA AACTGAGGTC AGAGCCAGTG AGCCCAGTAA CACCAACGTA GAGAGCATGA AAGCCACCAG
351 TTTCAGCAGG TGGGTGTCCC CACAAGAAAAG CCTGAGCAAG GGCCAACGTG CACGAAAGAA GTGGTCAATA
421 CCATTGNGGC CACAGAAAAG CATGGCTGGC CATGAGGACA GTGGGGCAAA GGACCCAGAG GAATNCANCT
491 AGCCAGGAGG CCACACTAGT TTGTGAACAG ACATGGCCAT TNATTAGGGT CTCATAGCGG AGTTGTCGNC
561 AGATTGCNT GGTNACGATT CAN

SEQ. ID NO:16

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1 GGNNTTTTAC CNCNATTGGA CTCCAAAGCA GTGGTAACAA CGCAGAGTAC GCCCCCTATG TATTTATTCT
71 TGCTCACCTC TCCTTAGTTG ATATCTGTTT TACCACCAGT ATTGTCCCCC AGCTGCTGTG GAACCTAAAA
141 GGACCTGACA AAACAATCAC ATTCCTGGGT TGTGTCATCC AGCTCTACAT CTCCCTGGCA TTGGGCTCCA
211 CTGAGTGTGT CCTCCTGGCT GTAATGGCTT TTGATCGCTG TGCTGCAGTT TGCAAACCTC TCCACTATAC
281 CGCCGTAATG AACCCCTCAGC TGTGCCAGGC TCTGGCAGGG GTTGCCTGGC TGAGTGGAGT GGGAAACACT
351 CTTATCCAGG GCACTGTCAC CCTCTGGCTT CCCCCTGTG GACACCGATT GCTCCAACAT TTCTTCGTGA
421 GGTACCCTCC ATGATTAAGC TTGCATGTGT GGACATCCAT GATAATGAGG TTCAGCTCTT TGTTGCTTCA
491 CTGGTCTTGC TCCTCTTGCC CTTAGTGCTA ATACTGCTGC CTATGGACAT ATAGCCAANG TGGCATAAAG
561 GATCAAGTCA GTCCAGG

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SEQ. ID NO:17

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1 GNNNNTTNTT CANTCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTCGCCC TTATTCCGGA GGGTATACAT GAAGGGATTG GTAAGTAGAC GTAAACTCGA AGCCAAGAAG
141 AGAATTTCTC TTAGAAAAGA GAATTGAAAC TAAAGAGAAA GAACTAGCAA AGAAGGAAAT ATTGAATATA
211 CAAGAGAGAG GAGACAGATG ATGGAACAAG ACTCTGAAAG AGGTGGAAGG GATTGAATAC AATCAAAAGT
281 ATGGTGAAGT CTAGTTCCAA GATGGTGGCG TAGGGGCAAG CTGGCTTTGC TTACCCCCCT GGCAGAAAAC
351 CAAAAACAAA TAGCACCAAG ATTATCACTA GCAATATCCC AGAACTCACA TATAAGGATG AGACAGTTCC
421 CAGGGCCAG AGAAGATCAG AAGCACAAGT GGGAGAAGTC AGCTTTGGAT GCTACTTTGT TCTAAGGGAG
491 ACAAGTTGGG AGGATGATTG CAGATGTATA TTCAATGTTA TAAACAGCC CATAAACAA AGATTGGAAA
561 ATGTTGAATT TTGAACCAG GAGCAAATAC TGGGAAGGC GAATTCAGC CACTTGCNGC C

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SEQ. ID NO:18

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1 GNNNNTTNAN TCANTGCCCT NGGGCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG
71 CAGAATTCGC CCTTGTTGCG CAAGGTGTAA ATGAAAGGGT TTGCGCAGGA GTAAATGAAG GGATTACGCA
141 GGAGTAAATG AAGGGATTAC GCAGGAGTAA ATGAAGGGAT TACGCAGGAG TAAATGAAGG GATTACGCAG
211 GAGTAAATGA AGGGATTACG CAGGAGTAA TGAAGGGATT ACGCAGGAGT AAATGAAGGG ATTACGCAGG
281 AGTAAATGAA GGGATTACGC AGGAGTAAAT GAAGGGATTA CGCAGGAGTA AATGAAGGGA TTACGCAGGA
351 GTAAATGAAG GGATTACGCA GGAGCAAATA CATAGGAAGG GCGAATTCCA GCACACTGGC GGCCGTTACT
421 AGTGGATCCG AGCTCGGTAC CAAGCTTGAT GCATAGCTTG AGTATTCTAA CGCGTCACCT AAATAGCTTG
491 GCGTAATCAT GGTATAGCT GTTTCCTGTG TGAAATTGTT ATCCGCTCAC AATTCCACAC AACATACGAG
561 CCCGGAAGCA TAAAGTGTA AGNCTGGGGT GCCTAATGAG TGACTTACTC CATTG

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SEQ. ID NO:19

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1 GNNANTNATT CCATCCATTG TCCCTTCAGA TGCATGCTCG AGCGGCCGCC AGTGTGATGG ATATCTGCAG
71 AATTCGCCCT TCTTGTTTTT TGTGCTGATA GATCATGGGA TTCAGCATGG GGGTGACCAC AGTGATACATC
141 ACTGAGGCTG TTGCATTGA GTGTGAGTTG CGGGTGGCAG CAGAATAAG GTACACCCTC AGGATTGCAC
211 CATAAAATAA GGAGACAAC TGAAGGTGAG ATGCACAGGT GGAAGATGCC TTGTACTTCC CCTGAGCTGA
281 TGAGATNGCA TGTATGGAAN GAAATTATNT TANAAGTAAG AGTAAAGNAT NCCAGTCAGG GGNANCNTTC
351 ACCCATCAGN TGCAANTTGT AAAAATTATA TTCAANCNAT NTGNATTAA NGAAAANCCT TATCANGTAN
421 AACTGCNAA GNTNTGNATT NANCCCTNGN ANTTAANNNT TCNACAAGAA AATAANGTGC GTTNNAACTC
491 TTNTAAGTCC CTNTCNCCAT TAANGTCNAN TCCNTCCNTA TCCCTTTTCN NATTTTGNAN TCNNGANTAC
561 NNTCTNNNGC NNTCNATTTT TNTNNTNNCT GACCTACTAA CCNATTNAGT TACNACAAGN CCNTTCNANT
631 CTCTATAATT NCTCGCANGT TNTCCCTCTT NNCANNTNCC CNTTNTNTC CCTNTTCCCC ATCTNC

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SEQ. ID NO:20

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1 CCATTGGCCC TCTAGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT CGCCCTTCCT
71 ATGTATTTTC TCTTACTGGG CTTTCCTGGT TCTCAAATC TTCAGCTCTC TCTCTTTATG CTTTTTCTGG
141 TGATGTACAT CCTCACAGTT AGTGGTAATG TGGCTATCTT GATGTTGGTG AGCACCTCCC ATCAGTTGCA
211 TACCCCATG TACTTCTTTC TGAGCAACCT CTCCTTCCTG GAGATTTGGT ATACCACAGC AGCAGTGCCC
281 AAAGCACTGG CCATCCTACT GGAGAGAAGT CAGACCATAT CATTTACAAG CTGTCTTTTG CAGATGTACT
351 TTGTTTTCTC ATTAGGCTGC ACAGAGTACT TCCTCCTGGC AGCCATGGCT TATGACCGCT GTCTTGCCAT
421 CTGCTATCCT TTACACTACG GAGCCATCAT GAGTAGCCTG CTCTCAGCGC AACTGGCCTT GGGCTTCTGG
491 GTGGNTGGGT TCGGGGGCAA TGCAGTGCCC ACAGGCCTTC AATCAAGTGG GCTGNTCCTT CTGGTGGCCC
561 CCGGTGCCAA TCAACCACTT TTTTTTTGGG ACAATTGCAN CCCTGGAATT GGCCC

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SEQ. ID NO:21

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1 GNNCTTANTT CAATCCCACC NANCCNTGCC GANGCATGCT CGNGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTCGCC CTTCCTATGT ATTTACTCTT ACTGGGCTTT CCTGGNTCTC AAACCTCTTCA GCTCTCTCTC
141 TTTATGCTTT TTCTGGTGAT GTACATCCTC ACAGTTAGTG GTAATGTGGC TATCTTGATG NTGGTGAGCA
211 CNTCCCATCA GNTGCATACC CCCATGTTNT TCTTTCTGAG CNACCTCTCC TTCCTGGAGA TTTGGTATNC
281 CNCAAGCNGC ANNGCCCCAA GCTTTGCNCA TCTTATTGCN CAGANGCNNN CCNNTACANN NACNCTCCTG
351 TTTNTCGCTN CCTTNCCTCT TNCTTCNCTC ANNTACTNCN TCTNCTNTAG TNTCTTTCTT CTCTNTCNCT
421 CNTNNCNCCT NTAATNTTCC NCCTNTTCTN NTTTCTNTTT TCCCTNCTCT GTTTCACCCC TACCTCTTAT
491 CCNTNCTNCT NACTTCANNC TCNGNCNNTN NNNCNCNNT AAATNTANGN NNANNTNNTN ATNTNCTCTT
561 CTCCTNTTAT ATCGCCTCTT CTCNTNCTTC CNNTTCTCTC TCCTCANNCA TATCNANTNT NTTCTACTCT
631 CGTNCNNTAT CTANNCTCCT NTTTCNGTCC TNCTTCTCCT NTCATTTCTA TATTNCTTCT CANACANTNT
701 TCGCATCGTN GCANCATCTC CTCCCATCTC CTGTNCTNCTN TTCCN

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SEQ. ID NO:22

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1 GNNNTTAANT CATTCCCCNC TCNATGCATG CTCGAGCGGC CGCCAGNGTG ATGGATATCT GCAGAATTTCG
71 CCCTTGTTTC GGAGGCAGTA GATGAATGGG TTGATGGAAT CTGAGACAGT GCTCTAGAAT CTGTGTTTCA
141 TACAGGATGA GATATAAATG AAACAAATGC TAAATAATGA CACAAGGTAC CTTGCCGAGA GAGGAATCAT
211 CCACCTGGAA GGGTAGGCTG TTTGTGAATA ATGTAGGGTG GGAGAGAAGG CTTTACTAAG GAGATGGGCT
281 TAAAGAATGT GAACGATGTG CTCACAGAGG CCACAGAAGA GAAATTATAG CCAGGAGAAC AACCTGAAAG
351 ACAAAGGACA CGGTGGCATG AGCGCATGTA ACACAATGTA CTCAGGAAAT GGCTGGCATC CTGAGATATG
421 GAGTGAATA CAGTACAGGG CTTTGTAAC TCAGCTTGA GTCAGATCAC AGAAAGCCTT GACAAGGAAC
491 TGAAATGGG TTCTGAAGGC CAGAAGCCCA TTCAAGATTC CCAAAGGGAA AACACAAAT CAGCTTGTTT
561 TCAGGACGTA ATTCTTGGA GTTGCTAGAA TTACATCAGA AAGGAGGTT ACNT

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SEQ. ID NO:23

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1 GNNNTNANTC ANNCANTGGG CCCTCTAGAT GCATGCTCGA GCGGCCGCCA GTGTGATGGA TATCTGCAGA
71 ATTCGCCCTT CCTATGTATT TCCTCTTACT GGGCTTTCCT GGTTCCTAAA CTCTCAGCT CTCTCTCTT
141 ATGCTTTTTT TGGTGATGTA CATCCCCACA GTTAGTGGTA ATGTGGCTAT CTTGATGTTG GTGAGCACCT
211 CCCATCAGTT GCATACCCCC ATGTACTTCT TTCTGAGCAA CCTCTCCTTC CTGGAGATTG GGTATACCAC
281 AGCAGCAGTG CCCAAAGCAC TGGCCATCCT ACTGGGGAGA AGTCAGACCA TATCATTTAC AAGCTGTCTT
351 TTGCAGATGT ACTTTGTTAT CTCATTAGGC TGCACAGAGT ACTTCCTCCT GGCAGCCATG GCTTATGACC
421 GCTGTCTTGG CATCTGCTAT CCTTTACACT ACGGAGCCAT CATGAGTAGC CTGCTCTCAG CGCAGCTGGC
491 CCTGGGCTCC TGGGTGNGGG GGTTCGTGGC CATTGCAAGT GCCCACAAGC CTAATCAGT GGCCCTGTCC
561 NTCTGGGGGC CCCCAGGCCA TTNACCACTT TTTCTGGGA CAATTGCACC CCTGGAATTG G

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SEQ. ID NO:24

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1 TNNNTAANTC ATTCCNTTGN CCCTCNAGAT GCATGCTCGA GCGGCCGCCA GTGTGATGGA TATCTGCAGA
71 ATTCGCCCTT TCCTTGTTAC TGAGGGAGTA GATTAGGGGA TTGATGGAAT CTGAGACAGT GCTCTAGAAT
141 CTGTGTTTCA TACAGGATGA GATATAAATG AAACAAATGC TAAATAATGA CACAAGGTAC CTTGCCGAGA
211 GAGGAATCAT CCACCTGGAA GGGTAGGCTG TTTGTGAATA ATGTAGGGTG GGAGAGAAGG CTTTACTAAG
281 GAGATGGGCT TAAAGAATGT GAACGATGTG CTCACAGAGG CCACAGAAGA GAAATTATAG CCAGGAGAAC
351 AACCTGAAAG ACAAAGGACA CGGTGGCATA AGCGCATGTA ACACAATGTA CTCAGGAAAT GGCTGGCATC
421 CTGAGATATG GAGTGAATA CAGTACAGGG CTTTGTAAC TCAGCTTGA GTCAGATCAC AGAAAGCCTT
491 GACAAGGAAC TGAAATGGG TTCTGAAGGC CAGAAGCCAT TCAAGATTCC CAAAGGGAAA AACACANATC
561 ACTTGTTTTT AGGACGTATT CTTGGGCAGT TGCTAGAATT ACATCAGAAA GG

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SEQ. ID NO:25

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1 GNNNTTANT CCATGCCCT CTAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTTC
71 GCCCTTGTTT CGCAGCCTAT AAATGAAGGG GTTGATGGAA TCTGAGACAG TGCTCTAGAA TCTGTGTTT
141 ATACAGGATG AGATATAAAT GAAACAAATG CTAAATAATG ACACAAGGTA CTTTGCCGAG AGAGGAATCA
211 TCCACCTGGA AGGGTAGGCT GTTTGTGAAT AATGTAGGGT GGGAGAGAGG GCTTTACTAA GGAGATGGGC
281 TTAAAGAATG TGAACGATGT GCTCACAGAT GCCACAGAAG AGAAATTATA CAACCTGAAA
351 GACAAAGGAC ACCGGTGGCA TAAGCAGATG TAACACAATG TACTCAGGAA ATGGCTGGCA TCCTGAGGTA
421 TGGAGTGGAA TACAGTACCG GGGCTTTGTA AACTCAGCTT GGAGTCAGAT CCAGAAAGCC CTTGACAAGG
491 AACTGAAAT TGGGTTCTTG AAGGCCAGAA GCCATTCAAG GATTCCCCAA AGGGGAAAA CACAAATCAA

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561 GCTTGTTTTT AGGGACCGTT AATTCTGGGG CCAGGTTGCT TGAATTACCT TCANGAAAGG GAGGTTTACA
631 CT

SEQ. ID NO:26

1 GNNCTTATTC ATCCCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG CAGAATTCGC
71 CCTTCTTTTG TTCCTCAGAG TGTAAGATTAG GGGGTTGATG GGGTTGATGG AATCTGAGAC AGTGCTCTAG
141 AATCTGTGTT TCATACAGGA TGAGATATAA ATGAAACAAA TGCTAAATAA TGACACAAGG TACCTTGCCG
211 AGAGAGGAAT CATCCACCTG GAAGGGTAGG CTGTTTGTGA ATAATGTAGG GTGGGAGAGA AGGCTTTACT
281 AAGGAGATGG GCTTAAAGAA TGTGAACGAT GTGCTCACAG AGGCCACAGA AGAGAAATTA TAGCCAGGAG
351 AACAACCTGA AAGACAAAGG ACACGGTGGC ATAAGCGCAT GTAACACAAT GTACTCAGGA AATGGCTGNC
421 ATNCTNAGAT ATGGAGNGNG AATACCAGTA CANGGCTTN TANACTCANC TTGGAGTNC AATCACANA
491 ANGCTTGCA AGGAAGTGA AATGGGTTCT GAAAGGCCAG AAGCCNTNA AGATTCCCAA AGGGAAAAA
561 CACAAATCAA GCTTTTTTNA AGNACNGTAA TTCNTGGNGC CAGTTGCTTA GAATTNCCAT CANAAANG

SEQ. ID NO:27

1 GGNNTAAGCC TTCCCCCTNC GATGCTGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA GAATTCGCCC
71 TTCCCATGTA TTTCTCTTA CTGGGCTTTC CTGGTTCTCA AACTCTTCAG CTCTCTCTCT TTATGCTTTT
141 TCTGGTGATG TACATCCTCA CAGTTAGNGG TAATGGGGCT ATCTTGATGN TGGTGAGCAC CNCCCATCAG
211 TTGCATACCC CCATGTACTT CTTTCTGAGC AACCNTCCN TCCTGGAGAN TTTGGNATAC CACACGCAAN
281 NAGNGNCCNA AGGCACTTGG NCNTNCTACA GNGGAGAAAG GCTTGACCAT ANNATTTTAC CATGCCNNGC
351 CTTANGNCAN ACCCNCTTN TNCCTNTNT TCCNCTNNNN GGTNNNTCAN CCGCANNCTT NNATCNNNTG
421 NANCCTCATN GAATATGGNN TNNGTNTNTC TTGAGAGCCT CNNGATCNA TTTTTTCCAN CNNTAAAGN
491 GGNGCTTNTC TCTCTNNNAT CTAGCTTNTT GGNTCTCTTT TNTNTNCTNA CCCGTGNTNT CCTATNTGNT
561 GTCTCTTCT ACNNNCTGCN NTTATTNTAN ATCANNTCTN NCNTTGCTCT CNTNTACNAC ATNATCATNC
631 TCNCTCCCN CTNTCNCTCT CTATNNCNTA CCATCNCTCT CTCTCATTC ANCTCTTNT CATGNTTGT
701 TCANTTANNC ACTCTCCNTC NCATCTTCTA TNCACANTNT TTNTNTTTT NCTCTCTANT TCTNNTTCCA
771 NTGTNCACTC CNNTCTTNNC NNTTNCCTA NCG

SEQ. ID NO:28

1 GTNNNTNANN NCATTGCCCC TCTNGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAAAT
71 CGCCCTTCTT ATGTAATTC TCTTACCGGG CTTTCTTGGT TCTCAAATC TTCAGCTCTC TCTCTTTATG
141 CTTTTTCTGG TGATGTACAT CCTCACGGTT AGTGGTAATG TGGCTATCTT GATGTTGGTG AGCACCTCCC
211 ATCAGTTGCA TACCCCATG TACTTCTTTC TGAGCAACCT CTCCTTCTCG GAGATTTGGT ATACCACAGC
281 AGCAGTGCCC AAAGCACTGG CCATCTACT GGGGAGAAAGT CAGACCATAT CATTTACAAG CTGTCTTTTG
351 CAGATGTACT TTGTTTCTC ATTAGGCTGC ACAGAGTACT TCCTCTGGC AGCCATGGCT TATGACCGCT
421 GTCTTGCCAT CTGCTATCCT TTACACTACG GAGCCATCAT GAGTAGCCTG CTCTCAGCGC AGCTGGCCCT
491 GGGCTTCTGG GTGGGTGGGT TTCGGGGCCA TTGCAAGTGC CCACAGCCCT TATCAAGTGG CCTGTCTTC
561 TGNGGCCCCC GGGCCCATCA ACCACTTTTT TCTGGGGACA ATTGCACCCT GGAATGGCCC

SEQ. ID NO:29

1 GTNNNTNANN CCATNCCATT GGGCCCTCTA GATGCATGCT CGAGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTCGCC CTTTCATGGT TCCGGAACA GTAAATTATG GGGTTCAATC ATGGTAACAG GAGGAGGCTG
141 AGTGATGGG CATGGATGGG GGCTGTGAAT GTGGCGGGAG CTCATGGATG TGCTCTTCTG AGTGCTTCAC
211 GTTCTGAGT GAAATAAGAA GCAAGGTCTA CACCGAGAGG GAGGAGACAG GCTCGGGTGA GTTTAGTGGA
281 TATGAATCCA AGAGAGACCA TTCAACTTAG TTGCTATTT TTTTTTCTC CAGTTATAGT CACTTGCATG
351 AATGTAGATG TGGAGTACTT GATCATAAGA TCCATTTTAT GGCAGAAGAC ATTATTTTTT TGAGCCTTCT
421 GCTGTCACTT TCTAAATAAG CAGGCCAGCC GGGCTGTGCA CCTAAATGTC TGTCTGGGAG GAGCAGGCTG
491 AGAAGTCTTG CAGTCTGCAG GACACCGAG GAATCGTATT GTGGGAACCG TCCCCGAGAA CCACACGAGC
561 CGTGCTNCTC AGTNTGACT GGAANAATGA AATTGNAAGC CAAGTNGTTC NNGGANCNNT

SEQ. ID NO:30

1 GNNNTNANN CCATTGCGCC CTCTAGATGC ATGCTCGAGC GGCCGCCAGT GTGATGGATA TCTGCAGAAAT
71 TCGCCCTTCC TATGATTTT TCTTCTAAC GATTGGAATG CCTGGGATTA GGCAGATGAT TTTCTTTTTC
141 CCCCATACCC CTCTATTATT TAGGTGATTG AGTTTAAATC CCTTTATCTA CACCTTCGG AACAAGGGCG
211 AATTCCAGCA CACTGGCGGC CGTTACTAGT GGATCCGAGC TCGGTACCAA GCTTGATGCA TAGCTTGAGT

281 ATTCTAACGC GTCACCTAAA TAGCTTGGCG TAATCATGGT CATAGCTGTT TCCTGTGTGA AATTGTTATC
351 CGCTCACAAT TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG
421 CTAAGTCACA TTAATTGCGT TGCGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCTGTG CCAGCTGCAT
491 TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTTGCCTA TTGGGCGCTC TTCCGCTTTC TCGCTCACTG
561 ACTCGCTGGG CTTCGGTCGN TCGGCTGCGG CGAGCGGGAT CAGCTCACTC AAAAGG

SEQ. ID NO:31

1 GNNNNNNNNT CANGCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTGCGCC TTCTATGTA TTTCTCTTCA CTTTCTCCGA CATCACTCAC AGCCACCCCA CCCTCAGCCT
141 CTCCCTCCTC CCATGTATTT TCTCTTCAAT CTCTCCTTCT TTGATATCCT GAACTTTCTG TAGCTCTTTA
211 TTTTCTCTTC CAATCCCTTC ATATACACGT TTCGTAAACAA GGGCGAATTC CAGCACACTG GCGGCCGTTA
281 CTAGTGGATC CGAGCTCGGT ACCAAGCTTG ATGCATAGCT TGAGTATTCT AACCGCTCAC CTAAATAGCT
351 TGGCGTAATC ATGGTCATAG CTGTTTCCTG TGTGAAATTG TTATCCGCTC ACAATTCCAC ACAACATACG
421 AGCCGGAAGC ATAAAGTGTA AAGCCTGGGG TGCCTAATGA GTGAGCTAAC TCACATTAAT TGCCTGCGCT
491 CACTGGCCGC TTTCCANGTC GGGAAACCTG TCGGCCAGCT GCATTAAATG AATCGGCCAA CGNCCGGGA
561 GAGGCGGTTT GCGTATTGGG CGCTNTTTCG TTCTTCGNTN ACTGATCGNT GG

SEQ. ID NO:32

1 GNNNNNNNNT TCATNCCATT GGGCCCTCTA GATGCATGCT CGAGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTGCGC CTTGTTGCTT AGAGTGTAATA TAAAAGGGTT AACATTGGCT TAGAGGTGAA GAGTAAATAC
141 ATAGGAAGGG CGAATTCCAG CACACTGGCG GCCGTTACTA GTGGATCCGA GCTCGGTACC AAGCTTGATG
211 CATAGCTTGA GTATTCTAAC GCGTCACCTA AATAGCTTGG CGTAATCATG GTCATAGCTG TTTCTGTGT
281 GAAATTGTTA TCCGCTCACA ATTCCACACA ACATACGAGC CGGAAGCATA AAGTGTAAG CCTGGGGTGC
351 CTAATGAGTG AGCTAACTCA CATTAAATTGC GTTGCGCTCA CTGCCCCTT TCCAGTCGGG AAACCTGTCTG
421 TGCCAGCTGC ATTAATGAAT CGGCCAACGC GCGGGGAGAG GCGGTTTGCG TATTGGGCGC TCTTCCGCTT
491 CCTCGCTCAC TGACTCGCTG CGCTCGGTCTG NTCGGCTGCG GCGAGCGGTA TCAAGCTCAC TCAAAGGCGG
561 TAATACGGTT ATCCACAGAA TCAGGGGGAT ACGCANGAAA GAACATGTGA GCAAAAT

SEQ. ID NO:33

1 GNTNTNANTC ATGCCCCCNC CGATGCNTGC NCGAGCGGCC GCCAGTGTGA TGGATATCTG CAGAAATTCGC
71 CCTTGTGCGG GAGCGAATAT ATGAAGGGGT TAAGGGAAGA GAAATACAT AGGAAGGGCG AATTCAGCA
141 CACTGGCGGC CGTTACTAGT GGATCCGAGC TCGGTACCAA GCTTGATGCA TAGCTTGAGT ATTCTAACGC
211 GTCACCTAAA TAGCTTGGCG TAATCATGGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT
281 TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG CTAAGCTACA
351 TTAATTGCGT TGCGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCTGT CCAGCTGCAT TAATGAATCG
421 GCCAACGCGC CGGGGAGAGG CGGTTTGCGT ATTGGGCGCT CTTNCGCTTC CTCGCTCACT GACTCGCTTG
491 CGCTCGGTCC GTTCGGCTGC GGCAGCGGT ATCAANTCAC TCAAAAGGCG GGAATACGGG TTTNCACAGA
561 AATCAGGGGG ATAACGNGG AAAGAACATG TGAGCCANAN GGCAGCAAAA GGCNAGGAA T

SEQ. ID NO:34

1 GNNNNNNNNT CANNCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTGCGCC TTGTTCCGAA GGCTATAGAT GAAGGGGTTT TAGGTTTTTA GGAACACAGG CTAAGGGGGA
141 AGAGAAAATA CATGGGAAGG GCGAATTCCA GCACACTGGC GGCCGTTACT AGTGGATCCG AGCTCGGTAC
211 CAAGCTTGAT GCATAGCTTG AGTATTCTAA CGCGTCACCT AAATAGCTTG GCGTAATCAT GGTCATAGCT
281 GTTCTCTGTG TGAAATTGTT ATCCGCTCAC AATTCCACAC AACATACGAG CCGGAAGCAT AAAGTGTAAG
351 GCCTGGGGTG CCTAATGAGT GAGCTAACTC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG
421 GAAACCTGTC GTGCCAGCTG CATTAAATGAA TCGGCCAACG CGCGGGGAGA GCGGTTTGC GTATTGGGCG
491 CTCTTCCGCT TCCTCGCTCA CTGACTCGCT GCGCTCGTTC GTCGGCTGCG GCGAGCGGTA TCAGCTCACT
561 CAAAGGCGGT AATACGGGTA TCCACAGAA CANGGGATAA CGCAGGAAAA GACA

SEQ. ID NO:35

1 GGNNTTNANT CATTGCCCGG CTNGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
71 GCCCTTCCGA TGTATTTTCT TCTACGTTAA GGTATTTTAA ATTGTTACTA ATGCATAAGG GCAACACATT
141 CTGTAATGCT GACAAGATGA AAGAGCCAAA AGTAATTAAT GATGCTGTTA CCTCACAAT ATGTATGTGT
211 GGATGTATAT ATATCTATT CAAATATGTA ACTATACATA TGTCTGTTT TAATTGAAAA CACCAGGTAA

281 TTATCATCTG TAGAAACCCT AGTGTCTCAG ATAAGTTGGC TAGTTTTTTG TTTCACATAA AGGAACAAAC
 351 ATTTATAGAT TTATATGTAT ATTAATAATG GTAAAAATTG GCTGGGTGCA GTGGTTCATG CCTATAATAC
 421 CAGCACTTTG GGAAGCCGAG GTGGGCGGAT TACTTGAGGT AAGGAGCCCA GCCTGACCAA CAAGGTGAAA
 491 CCCCATCCCT ACTAAAAATA CAAGAATTAG CCCGGGGATG GTGGTGGCCA CCTGTAATCC CAGCTACTTG
 561 GGAGACTGAA GCCAGGAAAA TCACTTGACC CAGGAAGCNG AGGTTGCAGG NGAG

SEQ. ID NO:36

1 NGNNNTTGAN TCAATTCNNN GNCGANGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCTA TGTATTTTCT TCTAGCCAAC CTCCCCTCA TTGATCTGTC TCTGTCTTCA GTCATAGCCC
 141 CCAAGATGAT TACTGACTTT TTCAGCCAGC GCAAAGTCAT CTCTTTCAAG GGCTGCCTTG TTCAGATATT
 211 TCTCCTTCAC TTCTTTGGTG GGAGTGAGAT GGTGATCCTC ATAGCCATGG GCTTTGACAG ATATATAGCA
 281 ATATGCAAAC CCCTACACTA CACTACAATT ATGTGTGGCA ACGCATGTGT CGGCATTATG GCTGTGCGAT
 351 GGGGAATTGG CTTTCTCCAT TCGGTGAGCC AGTTGGCCTT TGCCGTGCAC TTACCCTTCT GTGGTCCCAA
 421 TGAGGTGCGAT AGTTTTTATT GTGACCTTCC TAGGGTAACC AAAGTTCCT GTACAGATAC CTACAGGCTA
 491 GATATTATGG TCATTGCTAA CAGTGGTGTG CTCACTGTGT GGTCTTTTGT CTTCTAATCA TCTCATACAC
 561 TATCATCCTA ATGACCATCC AGCATTGCCC TTTAGATAAG TCGTNCAAAG G

SEQ. ID NO:37

1 GNNNTNANTC CNNNCCNCNN CTAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCCA TGTATTTGCT TCTCAGCAAC TTGTCTTCT CTGACCTCTG CTTCTCTTCC GTGACCATTTC
 141 CCAAGTTGTT ACAGAACATG CAGAACCAGG ACCCATCCAT CCCCTATGCG GACTGCCTGA CCCAAATGTA
 211 CTTCTTCCCTG TTATTTGGAG ACCTGGAGAA CTTCTCTCTT GTGGCCATGG CCTATGACCG CTATGTGGCC
 281 ATCTGCTTCC CCCTGCACTA CACCGCCATC ATGAGCCCCA TGCTCTGTCT CGCCCTGGTG GCGCTGTCTT
 351 GGGTGCTGAC CACCTTCCAT GCCATGTTAC AACTTTTACT CATGGCCAGG TTGTGTTTTT GTGCAGACAA
 421 TGTGATCCCC CACTTTTTCT GNGATATGTC TGCTCTGCTG AAGCAGGCCT TCTCTGACAC TCGAGTTAAT
 491 GAATGGGTGA TATTTATCAT GGGAGGGCTC ATTCTTGTC TCCCATTCCT ACTCATCTT GGGTCCTATG
 561 CAAGAATTGT CTCCTCATCC TCAAGGTCCC TTTNTAANG GTATCTGCAA GGCCCT

SEQ. ID NO:38

1 NGNNNTTNA NTCNANGCCN NGNGCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG
 71 CAGAATTCGC CCTTCCAATG TATTTACTTC TCAGCCAGCT CTCCCTTATG GACCTGATGT ACATCTCCAC
 141 CACCGTCCCC AAGATGGCGT ACAACTTCTT GTCCGGCCAG AAAGGCATCT CCTTCTGGG ATGTGGTGTG
 211 CAAAGCTTCT TCTTCTGAC CATGGCGTGT TCTGAAGGCT TACTCCTGAC CTCCATGGCC TACGACCGTT
 281 ATTTGGCCAT CTGCCACTCT CTCTATTATC CTATCCGCAT GAGTAAAATG ATGTGTGTGA AGATGATTGG
 351 AGGCTCTTGG ACACCTGGGT CCATCAACTC CTTGGCACAC ACAGTCTTTG CCCTTCATAT TCCCTACTGC
 421 AGGTCTAGGG CTATTGACCA TTTCTTCTGC ATGTGCCCAG CCATGTTGCT TCTTGCTGTA CAGATACTTG
 491 GGTCTATGAA TATATGGTTT TTGTAAGGAC AAAGCCTCTT TCTTCTTTTN CCTTTCATTG GCATCACTTC
 561 TTCTGNNGGC CGAGTCCTAA TTGCTGGCTA TATAATGCAC TCAAAGGAGG GGAGG

SEQ. ID NO:39

1 TAGNNNNNTT ANNTCANNGC CNNTGNNNGC TCAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC
 71 TGCAGAATTC GCCCTTCCAA TGTATTTTCT TCTCAGCAGG AGAGATATTT ATCCTCACTG CCATGTCCTA
 141 TGACCGCTAT GTAGCCATCT GCTGTCCCCT GAACTACGAG GCTGCACAGA GTACTTCTCT CTGGCAGCCA
 211 TGGETTATGA CCGCTGTCTT GCCATCTGCT ATCCTTTACA CTACGGAGCC ATCATGAGTA GCCTGCTCTC
 281 AGCGCAGCTG GCCCTGGGCT CCTGGGTCTG TGGTTTTCTG GCCATTGCAG TGGCCACAGC CCTCATCAGT
 351 GGCTGTCTCT TCTGTGGCCC CCGTGCCATC AACCCTTCT TCTGTGACAT TGCACCCTGG ATTGCCCTGG
 421 CCTGCACCAA CACACAGGCA GTAGAGCTTG TGGCCTTTGT GATTGCTGNT GTGGTTATCC TGAGTTCATG
 491 CCTCATCACC CTTGTCTCCT ATGTGTACAT CATCAGCACC ATCCTTAGGA TCCCCTCTGC AGTGGCCGGA
 561 GCAAAGCCTT CTCCCGTGCT CCTCGCATCT NAACGNNGTG CTCATTTGGT ATGGG

SEQ. ID NO:40

1 CATGCTCGAG CGGNCGCCAG NGNGATGGAT ATCTGCAGAA TTGCCCTTC CTATGTATTT GCTTCTCAGC
 71 AGGAGAGATA TTTATCCTCA CTGCCATGTC CTATGACCGC TATGTAGCCA TCTGCTGTCC CCTGAACTAC

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141 GAGGTGATTC ATGTGCCCCAT TAGAGCTTGA GAAGCACTGC TTGGAAGCCC CTTCTGCCAT CAATGAGGCT
211 GCACAGAGTA CTTCTCCTG GCAGCCATGG CTTATGACCG CTGCCTTGCC ATCTGCTATC CTTTACACTA
281 CGGAGCCATC ATGAGTAGCC TGCTCTCAGC GCAGCTGGCC CTGGGCTCCT GGGTCTGTGG TTTCGTGGCC
351 ATTGCAGTGC CCACAGCCCT CATCAGTGGC CTGTCTTCT GTGGCCCCCG TGCCATCAAC CACTTCTTCT
421 GTGACATTGC ACCCTGGATT GCCCTGGCCT GCACCAACAC ACAGGCAGTA GAAGCTTGNG GCCTTTGTGA
491 ATTGCTGNTG TGGGTATCCC GAGTTCATGC CTCATCACCC TTGNCTTCTA TGTGTACATC ATCAGGCACC
561 ATTCTCAGGA TCCCTTCTGC AAGNGG

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SEQ. ID NO:41

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1 ATGNNNNNNN NNTTTNNNAA ANTTTTNCCC ANTTTGGGCC GNCCCCCCT TCTTTAAGGN AATGGGCCCCA
71 TTGGGCCCTT CCCGGAAGGC CCGGGGGCNC CCGGCCCAA AGGTTTGGGT TGGGAAATGG GGGGAATTTA
141 AATTCCTTTG GGCCAAGGNA AAAATTTTCC NGCCCCCTT TTTTCCCTT TTTGGTTTTT ANCCGGGGGA
211 ANGGGGGGGT TGATTAATTA ATCGGGAAGN TNGGGGGGAA NTTTTTAAA AAAAACCTTG GGGGAAGGTT
281 CCAACCCAAC AAGGTTGGTT TTCCANGGGA CCGTTGGGAC CAGGCTTTN GAATCAAGAA TCCCAAAGGG
351 CATTCTTTTG GATTAAGGAA NGGTGCCGGG ACCGGTGAAA GGGAAAAAAC TGGTGGACCC CATACCAAAA
421 TGAGAACCAC GGTGAGATGC CGAGGAGCAC GTGGAGAAAG GCTTTGCTTC CGGCCACTGG CAGAGGGGAT
491 CCTGAGGATG GTGCTTGATG ATGTACACAT AGGGAGACAA GGGTGATGAG GCATGAAGTC AGGATAACCA
561 CAACAGCNAT CACAAAGGCC ACAAAGCTCT ACTGCCTGTG TGTGGGTGTC AGGCCAGGGC AATCCAGGGG
631 TGCAATGTCA CAAGAAAGAA AGTGGTTGAT GGCACGGNG GGCCACAGAA GGACAGGCCA CTTGATGAAG
701 GGCTTGTGGG CACTGCAATG GCCACGAAAC CACCAGACCC AGGAACCCAN GGCCAAGCTT GCGCCTGAAG
771 AGCAAGGCTA CTCATGAATG GCTTCCGTAG TNGTAAAGGA TAGCAAGATG GCAAAGGCAA GCCGGTCATN
841 AAGCCATGGC TTGCCNG

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SEQ. ID NO:42

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1 GNNNTTANNN CATTGCGCCC TCTAGATGCA TGCTCGAGCG GCNCGCCAGT GTGATGGATA TCTGCAGAAT
71 TCGCCCTTGT TGCGCAAGGA GTAGATGAAC GGATTGAGG CAAGGGAGTG CTGAGGAGAT AGACGGGTAT
141 AACTGGGCA CAAGTCCATG AGTAATCAAG GCCTGTTATT TAAAAAAGG AAAAAAAG CTTGAACAAT
211 ATAGAATCCC ATTACCCAGA GATAGACTGG ATGGTGAATT AAACCTTCTG GTGAATTTCT TTCCAGATAT
281 CTCTCTATGC ATATGTATAC ACAAGCAATT TTTGGAAGAA AAGATACTTT ATAAGGATAA GCGTGAAGAC
351 TGCAACGAAT GCAATGTGGA GAATGAAGGC AAGATGTGGC GAAGAAGGGC ACCACAATCT GGTGGCTGAG
421 AGAGTGCAAC TGCTACTACA GCTAAAAGGA GAGCTGGAGA AGCTGGTGAG GACAGTAAGA GATGAATCTG
491 GTTTAAGACA CGCTGAGTCT CAAATGCCAT GGCTCCCCTA GGTGCTCTCT TCAGATGTAA ATCTTAAGCT
561 CAAAGCAGGT GGATGAGAAA TCACATTTCA TAGTCCCTGC ACAGACGGCT NTNTGAGCT

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SEQ. ID NO:43

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1 GNNNNTTAAAN TCATTGCCCC GNNNGANGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT
71 CGCCCTTCCC ATGTATTTGC TTCTCAGCAA CTGTCTCTC TCTGACCTCT GCTTCTCTC CGTGACCATT
141 CCAAGTTGT TACAGAACAT GCAGAACCAG GACCCATCCA TCCCCTATGC GGACTGCCTG ACCCAAATGT
211 ACTTCTTCTT GTTATTTGGA GACCTGGAGA GCTTCTCTC TGTGGCCATG GCCTATGACC GCTATGTGGC
281 CATCTGCTTC CCCCTGCACT ACACCGCCAT CATGAGCCCC ATGCTCTGTC TCGCCCTGGT GCGCTGTCC
351 TGGGTGCTGA CCACCTTCCA TGCCATGTTA CACACTTTAC TCATGGCCAG GTTGTGTTT TGTGCAGACA
421 ATGTGATCCC CCACTTTTTT TGTGATATGT CTGCTCTGCT GAAGCTGGCC TTCTCTGACA CTCGAGTTAA
491 TGAATGGGTG ATATTTATCA TGGGAGGGCT CATTCTTGCA TCCATTCCCTA CTCATCCTTG GGTCTATGC
561 AAGAAATGCT CCTCATCCTC AAGGCCCTTC TNAAGGGTA TCTGCAAG

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SEQ. ID NO:44

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1 GNNNNTNANT CNTGCCCTGN CCCNCNGCNC NNGCGCCGCG GCGGATGGAT ATCTGCAGAA TTCGCCCTTG
71 TTAATAAGAG TATAGATGAA CGGATTCAGG GCAAGGGAGT GCTGAGGAGA TAGACGGGTA TAACTGGGC
141 ACAAGTCCAT GAGTAATCAA GGCCTGTTAT TAAAAAAGG AAAAAAAGCT TGAACAATAT AGAATCCCAT
211 TACCCAGAGA TAGACTGGAT GGTGAATTAA ACTTTCTGGT GAATTTCTTT CCAGATATCT CTCTATGCAT
281 GTGTATACAC AAGCAATTTT TGGAAGAAAA GATACTTTAT AAGGATAAGC CTGAAAACCTG CAACGAATGC
351 AATGTGGAGA ATGAAGGCAA GATGTGGCGA AGAAGGGCAC CACAATCTGG TGGCTGAGAG AGTGCAACTG
421 TCACTACAGC TAAAAGGAGA GCTGGAGAGG CTGGTGAGGA CAGTAAGAGA TGAATCTGGN TTAAGACACG
491 CTGAGTCTCA GATGCCATGG CTTCCCTAGG TTGCCTCTTN CAGATGTAAA TCTTAAGCTC AAAGCANGTG
561 GATGAGAAAT ACACATTTNA TAGTCACCTG CACAGACGGT TTTTGTAT

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SEQ. ID NO:45

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1 CATGCCCCGT CCCNCNAGNT NCNNGCNCCG CGGCCGCNAN GGATATCTGN ANAATTCGCC CTTCTATGT
71 ATTTACTTCT CCAACTTCTC CTTCCCATCT CTATCATTAG AACCCATTCA TATACACCCT ACGAAACAAG
141 GCGCAATTCC AGCACACTGG CGGCCGTTAC TAGTGGATCC GAGCTCGGTA CCAAGCTTGA TGCATAGCTT
211 GAGTATTCTA ACGCGTCACC TAAATAGCTT GCGGTAATCA TGGTCATAGC TGTTTCCTGT GTGAAATTGT
281 TATCCGCTCA CAATTCCACA CAACATACGA GCCGGAAGCA TAAAGTGTA AGCCTGGGGT GCCTAATGAG
351 TGAGCTAACT CACATTAATT GCGTTGCGCT CACTGCCCCG TTTCCAGTCG GGAAACCTGT CGTGCCAGCT
421 GCATTAATGA ATCGGCCAAC GCGCGGGGAG AGGCGGTTTG CGTATTGGGC GCTCTTCCGC TTCTCGCTCA
491 CTGACTCGCT GCGCTCGGTC GTTCGGCTGN GCGGAGCGGT ATCAGCTCAC TCAAAGGCGG NAATACGGTT
561 ATCCACAAGA ATCAGGGGGA TAACGCAAGA AAAGACATGT GA

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SEQ. ID NO:46

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1 GNNNTNATTN ATTGCATTGG GCCCTCTAGA TGCATGCTCG AGCGGCCGCC AGTGTGATGG ATATCTGCAG
71 AATTGCCCCCT TAGTGAGTAG ATGAAAGGGT TCAGCATGGG GGTCACCACA GTGTACATCA TAGCCATGAC
141 AGTGTCTTTT AGAGTAGAAC TATTAGCTGA TGAGCATAAG TAGAGACCAA TAACGGTTCC ATAGAACAGT
211 GACACCACAG ATAGGTGGGA GCCACAAGTA GAGAAGGCCT TGCAGACACC CTTAGAAGAA GGGACCTTGA
281 GGATGGAGGA GACAATTCTT GCATAGGACC CAAGGATGAG TAGGAATGGG ATGACAAGAA TGAGCCCTCC
351 CATGATAAAC ATCACCATT CATTAACTCG AGTGTGAGAG AAGGCCAGCT TCAGCAGAGC AGACATATCA
421 CAGAAAAGGT GGGGGATCAC ATTGTCTGCA CAAAAACACA ACCTGGCCAT GAGTAAAGTG TGTAACATGG
491 CATGGAAGGT GGTGAGCACC CAGGACAGCG CCACCAGGGC GAGACAGAGC ATGGGGCTCA TGAGGGCGGT
561 GTAGTGCAGG GGAAGCAGA TGGCCACATA GCGGTCATAG GCCATGGCCA CAAGGAGGAA

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SEQ. ID NO:47

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1 CNATGGGCCC TCTAGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT CGCCCTTCCA
71 ATGTATTTGC TTCTCAGCAA CTTGTCTTTC TCTGACCTCT GCTTCTCTTC CGTGACCATT CCCAAGTTGT
141 TACAGAACAT GCAGAACCAG GACCCATCCA TCCCCTATGC GGACTGCCTG ACCCAAATGT ACTTCTTCTT
211 GTTATTTGGA GACCTGGAGA GCTTCCTCCT TGTGGCCATG GCCTATGACC GCTATGTGGC CATCTGCTTC
281 CCCCTGCAT ACACCGCCAT CATGAGCCCC ATGCTCTGTC TCGCCCTGGT GGCCTGTCC TGGGTGCTGA
351 CCACCTTCCA TGCCATGTTA CACACTTTAC TCATGGCCAG GTTGTGTTTT TGTGCAGACA ATGTGATCCC
421 CCACTTTTTT TGTGATTTGT CTGCTCTGCT GAAGCTGGCC TTCCCTGACA CTCGAGTTAA TGAATGGGTG
491 ATATTTATCA TGGGAGGGCT CATTCTTGTC ATCCCATTC TACTCAATCC TTGGGTCTAT GCAAGAAATT
561 GTCTTCTTCA TNCTCAANGG CCCTTTCTTC TAANGGTATC TTGCAAG

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SEQ. ID NO:48

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1 ANNNCCNTNG GAGCTCCAAA GCAGTGGTAA CAACGCAGAG TACGCCCCCT ATGTACTTAC TTTTGTTAAG
71 TCCAACCTCC ATCCTCCTTG GCCTTTTGAT TCAATTGATC ACTCCTTCTT CCTCAAACA CTTGTTCAC
141 TCATCCTTTC TCAGTCTCCT TTGTGGATT TCCTCATTT ATTTGACCTC TTGCTGGTGA ACCCTTTCAT
211 ATACACTCTC CGTAACAAAG AGGGCGTACT TCTGTGCTCT TGAGCGNACT GATGGNACCC AGCTTTTGT
281 CCCTTTAGTG AGGGNTAATT GCGCGCTTGG CGNAATCATG GNCATAGCTG NTTNCTGNGN GAAANTGNTA
351 TTTGNTNAC AATTNCACAC AACATACNAG CCGGGAGCAT AAAGGGNNAA GNCCTGGGGN GCCTAATGAG
421 GGAGCTTACT CACAATAATT GGGGTGNGCC CACTGGCCCC TTTTCAGGCG GGAAACCTN GCGGGGCCAG
491 CTGGAATAAA TGAATCGGGC CACGCGCCGG GGAGGAGGGC GGGTTNNGGA ATTGGGCGCT TTTCCNTTT
561 CTNNGTTAAT GGACTNNGTN GGCNNNGTCC GTTCGGTTGG GGGGANCGGN NNT

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SEQ. ID NO:49

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1 AAÇGCAGAGT ACCGCCACT ACGTAATCTG TACATGAAAG GGTTTAAAG AGACTGGGAA GAGAGGAATT
71 GGCAAGATCA AGCAGAGGCA ACTCCTTCTA GTCCTTCTAG TACCGCAAGG GGCAGATAAA TGGAATGGGT
141 AACACCTAGA GGAAAGTATA CTTGCCAAA GCAAATNCAT AGGGGGGAGT ACATTATCGG GTTGAAAAA
211 GTATTCCATG CAGATAAAAA CAAAAGCAA ATACATCGGG GCGTACTTTC TGTCGTCTTT GAGCGTACTG
281 ATGGTACCCA GCTTTTGNCT CTTTAGTGAG GGTTAATTGC GCGCTTGGCG TAATCATGGT CATAGCTGGT
351 TTCTGTGTGA AATTGTTATC CCGCTCACA TTCACACAAC ATACGAGCCC GGGAGCATAA AGTGTAAGC
421 CTGGGGTGCC TAATGAGTGG AGCTTACTTA CATTAAATTG CGTTGCGCTC ACTGGCCGCT TTCCAAGTC
491 GGGAAACCTG TCGTGNCAGC TTCANTAATG AATCGGCCAA CGCCGCGGGG AGAGGCGGGT TGGTATTGG
561 GCGCTCTTCC GCTTCTTNGT TNACTGACTT CGG

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SEQ. ID NO:50

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1 GNNNTTTAAC NCCGGNGCTN CNAGCAGTGG AACACGCAG AGTACGCCCC CGATGTACTT TCTTTTTCAG
71 TCTCAAGTCT TCCTCTTCTC CAAAGATTTT GTCTTTTCTA CTACCTGAGC TACCAAATCC CTTGTTCATCA
141 ATTTCAATAA CTGTATTCTC TTCATCATTT CAACCTCAAA CGTGTTCATCT CAGAACAAGC TTCATGTTAC
211 TTCCAATTTT ATCCTTCTTG TTTGCTGATT CCAAGAATTC CAGTCCCATC TAGGCCCGCA ATGCATTGTT
281 CCTGCCACCC TTTTCATATC CTCAATTCCC TTGTATCATC ACTTTCCTTT TATATAGCAC AGATTCCATG
351 ATTCATAACA ATAATTATGT TTTTTTTTGC ATGTGCTCTT AATTTCTTTT CTTGCTCCTA TTATCTTCTA
421 TCATACCTTT CTGGAACAC TAATTCTGGT GAAATATACT CTTTGTGGAC TTTGCACTTA TGCTCAGTCA
491 GCTGAAGATG ATGGCTAGAC AAATACTCAC AATCATGCTG ACTGGCCCAA TTTATAGTCA TGACCACCGA
561 TTACAAACCC CTTCAATTTAT TCTCCGCAAC AGGGGCGTCT TCTGCGCTTG AGCGTCCGGT GGGG
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SEQ. ID NO:51

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1 GCAGTGGTAA CAACGCAGAG TACGCCCCGT ACGGAGGCTG TAAATAAAGG GGTGAGGAA GTAAAGTACT
71 TCACAGTACT GGAGCACACA GCATGTGAAT TTCAGCCAAA GGACAAATGC CTCCAAAAAA AGTTAATTCA
141 CAGTGCAGCA GGGCGAGGCA CTTGTCTTAT TCGCTGGTTC TCACATTGAC CCTGAAAGGA CTTTTTTTTG
211 TTAATCCCAT TTTACAGAT GGGAAAGGGA CTCTGTATGG TTGTCACTTT TATCCAAAGT CTCATAGCCA
281 GTAAGAAGCT GCCCTCAAAG TCCCTACCCT GTCTTCCATT CGACTATTCT GAGGTTTCTA CCCAGAAACC
351 CCATACCTCT GCCTTATATT TTAATGAAAA GTATGTCTCC AGGTTTATGT GGAGAATAAC CAAGACCTCA
421 GAAACATTTA GTGAAATCA GAGCTAGAAG GAATCTGTTT TTTTGCAGT TCAGAGAAAC TGACTTGGAT
491 AAGACATCAA AGTTGTCTTG TGCAGCAAAT TCTCCTCCGG CACATAGTAG GCACTCTGAT AAATTCAAAA
561 AGGCTTCTAA GAAGAGGCAG AAGN
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SEQ. ID NO:52

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1 GTGAANCCAN NNTAANNCCN ATTGGAGCTC CAAGCAGTGG TAACAACGCA GAGTACGCCC CCGATGTAGT
71 TTCTTCTTTC CTTCTTCTCC TCCTTCTTCT CTTCTTCTCT TTCTCTCTCT CTCCCTCTCC CTCTCCCTCT
141 CCTCTCTCTT CTCTTTTTTC TTCTCTTCTC TCCTCTCTCC CCAATCCGT TCATGACTTC TTCTTCTTCC
211 TCTTCTTCTT CTTTCTTCTT TTCTTCTTTT TCTCTAAGCA GGATCCTGGG CTGTTCAAAC CAGAGAGCTG
281 TAAGTCTTTT CTTTCCCAT TACTGTTAGA TCCGTTGAAT CGGCTCCAGA AACCACAAAC GTTAACCCTT
351 GCATTTACAC GTTTCGTAAC GGGCGTACTT CTGTCGTCTT GAGCGTACTG ATGGTACCCA GCTTTTGTTC
421 CCTTTAGTGA GGGTTAATTG CGCGCTTGGC GTAATCATGG TCATAGCTGT TTCCTGTGGG AAATTGTTAT
491 CCGCTCACAA TTCCACACAA CATACGAGCC GGGAGCATAA AAGTGATAAG CCTGGGGTGC CTNATGAGTG
561 AGCTAACTCA CATTAAATTG GTTGGCGTTA CTGNCCGTTT TCAGTCNGGA AAN
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SEQ. ID NO:53

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1 TNANNCNNNT TAANNCCCAT TGGAGCTCCA AAGCAGTGGT AACACGCAG AGTACGCCCC CGATGTACTT
71 GCTTCTTCTT CTTTGGAGTG GCTGAATGCT TCCTCCTGGC TACCATGGCA TATGACCGCT ATGTGGCCAT
141 CTGCAGTCCC TTGCACTACC CAGTCATCAT GAACCAAAGG ACTCGTGCCA AACTGGCTGC TGCCCTCTGG
211 TTCCCAGGCT TTCTGTAGC TACTGTGCAG ACCACATGGC TCTTCAGTTT TCCATTCTGT GGCACCAACA
281 AGGTGAACCA CTTCTTCTGT GACAGCCCAC CTGTGCTGAG GCTGGTCTGT GCAGACACAG CACTGTTTGA
351 GATCTACGCC ATCGTCGGAA CCATTCTGGT GGTATGATC CCTGCTTGC TGATCTTGTG TTCCTATACT
421 CGCATTGCTG CTGCCATCCT CAAGATCCCA TCAGCTAAAG GGAAGAATAA AGCCTTTTCT ACATGTTTCT
491 CACACCTCCT TGGTGGCTCT CTTTTCTATA TATCATTAAG CCTCACCTAC TTCCGGCCTA AATCAAATAA
561 TTCACCTGAG GGCACGAAGC TGCTATCATT GECTACACTG NTATGACTCC A
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SEQ. ID NO:54

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1 GPTNTTCCAT GGACTCCCAA GCAGTGGTAA CAACGCAGAG TACGCCCCCT ATGTACTTAC TTCTTGCTGG
71 CTTATCATTT ATAGATATCA TTTATTCTTC ATCCATTTC CACAGATCGA TTTACAGACT GTTCTTTGGG
141 AATAATTCCA TATCCTTCCC ATCTTGCTTG GCCAGCTCT TTACAGAGCG CTTTTTTGGT GGGTCAGAGG
211 TCTTTCTTCT GTTGGTGATG GCCTATGACC TTGCATTACT TGGTTATCAT GAGACAATGG GTGTGTGTTT
281 TGCTGCTGGT AGTGTCTTGG GTTGGAGGAT TTCTGCACTC AGTATTTCAA CTTAGTGTTA TTTATGGGCT
351 CCCATTCTGT GACCTCAATG TCATTGATCA TTTTTCTGT GATATGCACC CTTTATTGAA ACTGGTCTGT
421 ACCGATACCC ATGTTATTGG CCTCTTAGTG GTGGCAATGG AGGACTAGGT TGCATATTG GGNTTCTGCT
491 CTTACTCATC TCTTATGGNN CATCTGCACT CTCTAAAGAA CCTTAGTCAG AAAGGGAGGT GAAAAGCCCT
561 CTAACCTGC AGTTCCACAT AACTGGGGGG TGGTTTCTTC TTTGTN
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SEQ. ID NO:55

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1 TTANNCNNNT TNAATNCCNT TGGAGCTCCA AAGCAGTGGT AACAAACGCAG AGTACGCCCC CAATGTACTT
71 GCTTCTTCTT TTTTGGGGCT GCTGAGTGCT GCCTCCTGGC CACCATGGCA TATGACCGCT ACGTGGCCAT
141 CTGTGACCCC TTGCACTACC CAGTCATCAT GGGCCACATA TCCTGTGCCC AGCTGGCAAG CTGCCCTCTG
211 GTTCTCAGGG TTTTCAGTGG CCACTGTGCA AACCACATGG ATTTTCAGTT TCCCTTTTTG TGGCCCCAAC
281 AGGGTGAACC ACTTNTNTNG TGACAGCCCT CCTGTTATTG NACTGGTCTG TGCTGACACC TCTGTGTTTT
351 GAACTGGAGG CTCTTGACAG CCACTGCGTA ATTCATTCTC TTTCCCTTCT TGCTGATCCT GGGATCCTAT
421 TTCGCATTCT CTTCACTATC TTAAAGGATG CCGTCAGCTG AGGGGAAACA TNAGCATTC TNCACCTGTT
491 CGCCACCTC TTGGGTGGCT CTCTCTCTA TAGCACTGGC AATCCTTAAC GTATTTTCCG ACCCCAATTC
561 AAGTGCCTTT TTNTGAGAAG CAAAGAACT GGTGTCACT TTTTTTTCAC AAGGGGNGAC TTCCAATGTT

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SEQ. ID NO:56

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1 GNGNTTTNNN CCATGGAGCT CCAAAGCAGT GGTAACAACG CAGAGTACGC CCCCCATGTA CTTTCTTCTT
71 CTTTGGAGTG GCTGAATGCT TCCTCCTGGC TACCATGGCA TATGACCGCT ATGTGGCCAT CTGCAGTCCC
141 TTGCACTACC CAGTCATCAT GAACCAAAGG ACTCGTGCCA AACTGGCTGC TACCTCCTGG TTCCCAGGCT
211 TTCTGTAGC TACTGTGCAG ACCACATGGC TCTTCAGTTT TCCATTCTGT GGCACCAACA AGGTGAACCA
281 CTCTTCTGT GACAGCCAC CTGTGCTGAG GCTGGTCTGT GCAGACACAG CACTCTTTGA GATCTACGCC
351 ATCGTCGGAA CCATTCTGGT GGTCAATGATC CCCTGCTTGC TGATCTTGTG TTCTTATACT CACATTGCTG
421 CTGCCATCCT CAAGGTCCTA TCAGCTAAAG GGAAGAATAA AGCCTTTTCT ACATGTTTCT CACACCTCCT
491 TGNTGTCTCT CTTTTCTATA TATCATTAAG CCTCACCTAC TTCCGGCCTA AATCAAATAA TTCACCTGAG
561 GGCAAGAAGC TGCTATCATT GNCCTACACT GTTATGACTC CATGTTGAAC CCCATAATTT ATTCATTGAG
631 C

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SEQ. ID NO:57

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1 TTATNNCCAT TGGAGCTCCA AAGCAGTGGT AACAAACGCA GAGTACGCCC CCCATGTATT TTCTTTTTCT
71 TGGGGNAGCT GNATGCTTCC TNCTGGCTAC CATGGNATAT GACCGGCTAT GNGGNCATCT GCAGTCCCTT
141 GNNCTCCCAG TCATTATGAA CCAAAGGACA CGGGCCAAAC TGGCTGGTGN TTCCTGGGTC CCAAGCTTTC
211 CTGNAGCTAC TGNGCAAGAC CACAATGGCT CTTNAGNTTT CCATTCTGNG GCACCAACAA GGTGAACCAC
281 TTNTTCTGN GACAGCCGGC TGTGCTGAAA GCTGGTCTGN TGCAAGACAC AGCACTGTTT GAGATCTACG
351 CCATCGTCGG AACCATCTG GTGGTCAATG AACCCTGCT TGCTGATCTT GNGTTCCTAT ACTCGNATTG
421 GTGCTGCTAT CCCTCAAGAA CCCATCAAGC TAAANGGGAA GCAATAAAGN CCTTCTCTA CGTGCTCCTT
491 AACACCTCCC TTGGTGGCCT CTCTTTTCTA ATATAATCNT CTAAGCCTCA ACCTACTTCT TGGGCCTNAA
561 NTCAAATAAA TTCTTCTGGA GAGGCAAGAA GGTGGTATTC ATTTATNCTA CACTGGTNGN GACTCCATGN
631 TGGAAC

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SEQ. ID NO:58

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1 GTNATNCCNT TTAATNCCNT TGGAGCTCCA AGCAGTGGTA ACAACGCAGA GTACGCCCGT TCCTCAGACA
71 GTATATGAAT GGGTTAAAAA TGGGCCAGAG CAGATGCAGG AAGATCAAAT AGGAGGCTAC TGCAGTAGAG
141 TCAAATCTAG GGCTGATGGT TTCTTGGGAT GCATAGTAAT AGGTAGATAG AGAAAGTCTT TAGGAGGTAG
211 AATGGACAGG ACTTCACAAT GCATTAAATG TAGGGAGAAA AAAATGATT CCTGGGTTTC TAGCTTGAGC
281 TAGTAGGGAT AGTGGTAGAA TTTACTGATA TGGAAAAC TGAGGAAAAG AGTTTGGGAG AGAAAGATGG
351 CAAGTTAAAT ACCTGTGGGA AATATAATCA CAGACACTAA ATAGGCAGCT GTGTGGGTGG CAAAGGAGAG
421 CCATGGGCTA GGAACATACA GTGGGATTCC CTGGCATGTC ATTGGTTACT GAAGTCAGAG TGTATGAGAC
491 AGCCTAAGGA GAGAATNCAC ACAGGAGAAG AAAGAATAA ACATTCAGTG GCTGGCCAGA GGATGAGAAA
561 CCCAAGAGAT TGGACTGTTT AGGAGCAACA GTGTTGNGAA AAGGGAGAAA NGGTTGAAAT T

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SEQ. ID NO:59

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1 GGNTTTANNC NCTGGAGCTC CAAAGCAGNG GTAACAACGC AGAGTACGCC CATTGCGTAG CGTGATACATA
71 AAGGGGTTGG AGCTGAAGGA GGAGATAAAG AAGAAGACAG CCAGAACCTT GTCCTCTGTC GGAGATCGCA
141 GGGATCTTGG GCCGTAGATA GGTATAAGCA AAGGGTGCAT AGTAGAAAGT CACTACAGTG AGGTGGGTG
211 TGCAGGTCGA ATAGGCCTTC TTCCTCCCTT CTGCAGAGTG CATGTGGTAG ACAGCAAGGA GAATCCGGCC
281 ATAGGAACAT GCAATACAAA TGAAGGAAA CACAAGAAA ATGGTGGTGC TCAAAAACAC CGTGCACTCA
351 TAGACCCAGG TATCCGTGCA GGCTAGGGTC AACATAGCTG GAACATCACA GAAAAATGA TTGATGGCTC
421 TGGACTTGCA ATATGGGATA CGGAGTGCAT ATACCGTGTG AGCACAAGAG TTGATGGAGC CTATCATCCA

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491 AGATCCTGTT ATCATCAGTG CACACACTCT TTTTCTCATA CGGATGAGAT AGTGGAGAGG AAAGCAAATA
561 GCCACATAAC GATCATAGGC CATTGATGTC AGGAGCAGCG CTTCTGCACC TGCTAAAGTC AGGAAGAAGA
631 T

SEQ. ID NO: 60

1 TGTTANTCCN NTTTNCNTCC ATTGGAGCTC CCAAGCAGTG GTAACAACGC AGAGTACGCC CTCCTTGTTT
71 CTGAGAGTGT AGATGAAGGG GTTATAGGAG ATAAAGATCA GGGCAATATG TAGGACAAGG ACACAGACAC
141 TGACAACAAA GTTGATTATC TCATTGACAG TGGTGTCTGT GCAGGCCAGC TTCAGCAGGG GTCTCACATC
211 ACAGAAGAAG TGGGAGATGA CAAAGTCATC ACAAAGGGGC AGGCCAAACA TAGATGTTAC TTGGACAATA
281 GCCATGCCCA GGCCAATCCT CAGTGACCCA GATCCCAGTC AGACACAAGC CCTCTTACCT ATGAATACCG
351 TAAGGGGTTG CAGAAGACCA CATAGCAATC ATATCCCATG GCTATGAGAA GAAAGCAGTT GTTGATGCCA
421 AAAGTCACAT AGAAGAGCTG AGTGACACAG CCTTGCATGA CAATAAGCTA GTGAGGATTC AAGAGGCGAG
491 AAAGCATATG GGGAGTAATG GCCACCATGT AGCAGGTCTC AGAGATAGAC AGCAATGCTT AGGAAAAAGT
561 ACATGGGCCG TACTTCTGTC GTCTTGAGCG TACTGATGGT ACCCAGCTTT TGTTCCCTTT

SEQ. ID NO: 61

1 GTNANNCCNN TGTAGCTCCN AAGCNGAGCT AACAAACNNAG AGAACAACGC AGAGTACGCC CCCGATGTAC
71 TTGTTCTTAC TCTTTGCTGG ATTTGAAAAC TTCCTCCTGT CCGTGATGGC CTATGACCGG TTTGTGGCCA
141 TCTGTCACCC CCTGCACTAC ATGGTCATTA TGAACCCTCA CCTCTGTGGA CTGCTGGTTC TAGCATCCTG
211 GACCATGAGT GCTCTGTATT CTTTGCTACA AATCTTAATG GTAGTACGGC TGTCCTTCTG CACAGCCTTA
281 GAAATCCCCC ACTTTTTCTG TGAACCTAAT CAGGTCATCC AACTTGCTTG TTCTGATAGC TTTCTTAATC
351 ACATGGTGAT ATATTTTACA GTTGCGCTGC TGGGTGGAGG TCCCCTCACT GGGATCCTTT ACTCTTACTC
421 TAAGATAATT TCTTCCATAC ATGCAATCTC ATCAGCTCAG GGGAAGTACA AGGCATTTTC ACCTGTGCAT
491 CTCACCTCTC AGTTGTCTCC TTATTTTATG GTGCAATCCT AGGGGTGTAC CTTAGTCTGC TGCCACCCCG
561 AACTCACACT CAAGTGCAAC AGCCTCAGTG ATGTACACTG GGGCACCCCC AT

SEQ. ID NO: 62

1 GNNNNNNNAT TTNATGCCNT TNTTGATTCC CNTTNNNNNN NCAAGCAGNG GTAACAACGC AGAGTACGCC
71 CCCTATGTAT TTCTTCCTAA GATCCAAATA TTAAATAAAA AGACAGTCAT CCCACCACTA ACTAAAGTAG
141 TGTTTCCAC ACTTCTCTAT TAAGAAGCAT GTGAGATACT TGTTACAAAC ATAACATCCT GGTCCCACCC
211 CAAAGCCACT CAATCAAATA CTCCAGGGAA GGGATCTAGG AATTTCGTAGG TTTAACGAGT GCCCCAAAT
281 GATTATTACC TGTGGAGAA TCTAGGCAAC AATGAATTAA GGAAAGCTCT CTACCATTTC GTACTGGTAC
351 CAGGTTTGAG GATCACAGGG AAGAGGGTAA GCATATCAGA CTAGCAGAGC TGCCAGAAGT CGGGCTTTCA
421 AAAGAGAGGT GCCACCCTCT CCCATGTCCA TGTAAGTAGC AAACAACCCT CTCATGTACA CTCTGAGGAA
491 CAAGGGGGCG TACTTCTGTC GTCTTGAGCG TACTGATGGT ACCCAGCTTT TGTCCTTTTA GTGAGGGTTA
561 ATTGCGCGCT TGGCGTAATC ATGGTCATAG CTGTTTCCTG TGTGAAATTG TTATCCGCTC ACAATTCT

SEQ. ID NO: 63

1 TGTAGCTCCA AAGCAGTGGT AACACGCGAG AGTACGCCCT CTTGGTTACG TAAGGGAATA GATGATGGGG
71 TTCAGCATGG GGGTGACTAC AGTGATCATG ACAGTGCCCA CACGGTCCCA CTCTGCTCGC GTCGGGACGT
141 GGCTTGAAG TAGACTGCAA TGACTGTCCT ATAGAAAGAG GCTCACCACA NCCAGGTGGG AGCCACAGGT
211 GGGNCACAAG TCCCGAGGCC TCCAGAGGC TTGAGGGCAG CTGGAGCACG GGNAAGCTTG NTATGGNCCC
281 ACAAGGAGGC GAGGATGAGC AGNAAGGGAG TGACCACCAC TTGCNGCGCC CTNGGTGAAG ATGAGCAGCT
351 TGGATGTGGT GGNTGTCAGA GCACGAGAGC CTTTAAGAGA GGCTTGGTGG GTCACAGAAG AAGTGGGNGC
421 ACTTTGTGGG AAAGCACAGA AAGGACAAGC GAGCCATGAG CAGGATATAC AGGAGGGAGT TGTCCGTGGG
491 ACACCAGCCA TGCCATTCCA ACCAGGGCTG CGCACATNGC CGGGGACATT CTCGTGGGAT AAGGGAAGGG
561 GTGCCGGATN GGCACGTATC AGTCATAGGC CTTGGNCGCC AGAAGACAGC TTTNAATTTA CCCCAGG

SEQ. ID NO: 64

1 GTTANNCCNT NTANCTNCAA NNGAGGTAAC AACGCAGAGT ACGCCCCCA TGTATTTGCT TCTTGTCCAA
71 CCTGTCCTTT GTAGAGATCT GCTACACCAC CGTTGTGGTG CCCTTGATGC TTTCCAACAT TTTTGGGGCC
141 CAGAAGCCCA TTCCATTGGC TGGATGTGGG GCCCAAATGT TCCTCTTTCT CACACTTGGT GGTGCTGACT
211 GTTTCCTCTT GGCGATCGTG GCCTATGACC GCTATGTGGC CATCTGCCAC CCTTTGCAAT ACCCTCATC
281 ATGACCTGCA GTCTGTGCGT GCAGATGCTG GCGGCGCTG TGGGCTGGC CTTCTTCTC TCCCTGCAGC
351 TCACCGCCTT AATCTTCACC TTGCCCTTCT GCGGCTACCG CCAGGAAATT AACCCTTCC TCTGCGATGT

421 ACCTCCGTCC TGC GCCTGGC CTGCGCTGCA TCCGTGTTCA CCAGGCTGCC TCTATGTCGT GAGCATCCTC
491 GTGCTGACCG TCCCCTTCTT GCTCATCTGC GTCTCCTACG TGTTTCATCAC CTGTGCCATC CTGAGCATCC
561 GTTCTGCTGA GGGCCGGCAC CAGGCCTTTT CAACTGCTCT TCCGG

SEQ. ID NO: 65

1 TGTAGCTCCN AAGNNGAGNT ANCAACGCAG AGTACGCCCG CGGAATCTAT AGATGAAAGG GTTTGGNGAG
71 TCAGAAGAAG GAAGTACATG GGAGTCATAA CAGTGTAGGA CAATGATGGC AGCTTCTTGC CCTCAGGTGA
141 ATTATTTGAT TTAGGCCGGA AGTAGGTGAG GCTTAATGAT ATATAGAAAA GAGAGACAAC AAGGAGGTGT
211 GAGGAACATG TAGAAAAGGC TTTATTCTTC CCTTTAGCTG ATGGGATCTT GAGGATGGCA GCAGCAATGT
281 GAGTATAGGA ACACAAGATC AGCAAGCGGG GGATCATGAC CACCAGAATG GTTCCGACGA TGGCGTAGAT
351 CTCAAAGAGT GCTGTGTCTG CACAGACCGG CCTCAGCACA GGTGGGCTGT CACAGAAGAA GTGGTTCACC
421 TTGTTGGTGC CACAGAATGG AAAACTGAAG AGCCATGTGG TCTGCACAGT AGCTACAGGA AAGCCTGGGA
491 ACCAGGAGGT AGCAGCCAGT TTGGCACGAG TCCTTTGGTT CATGATGACT GGGTAAGTGC AAGGGACTGC
561 AGATGGCCAC ATAGCCGGTC ATATGCCATT GGTAGCCCGG GANGAAGCT

SEQ. ID NO: 66

1 GTTATNCCTT GTTGCTCCCN AGCAGAGGTA ACAACGCAGA GTACGCCCTT ATTTCTCAGA TATANGATGA
71 AGGGGTTTCAG AAAAAGAATG AGCAAAGAAA ATCTGGGCCA GGCGGGCATC AAAAGAAATA GTCTTGTGCT
141 CAACCAAGAAA GTCTGCAATC ATTTTAGGGG TAGCAGAAGA GGCAACACAT ACGTCTATAA ATGACAGGTT
211 GGCAAGAAGC AAATACATTG GGGCGTACT TCTGTCTGCT TGAGCGTACT GATGGTACCC AGCTTTTGT
281 CCCTTTAGTG AGGGTTAATT GCGCGCTTGG CGTAATCATG GTCATAGCTG TTTCTGTGT GAAATTGTGA
351 TCCGCTCACA ATTCCACACA ACATACGAGC CGGGAGCATA AAGTGTAAG CCTGGGGTGC CTAATGAGTG
421 AGCTAACTCA CATTAAATTG GTTGCGCTCA CTGCCGCTT TCAGTCGGGA AACCTGTCTG GCCAGCTGCA
491 TTAATGAATC GGCCAACGCG CCGGGGAGAG GCGGTTTTCG TATTGGGCGC TCTTCCGCTT CTCGCTCACT
561 GACTCGCTTG CGCTCGGTG TTCGGCTTGC GGCGAGCGGT ATCAAGCTCA CTCAAAT

SEQ. ID NO: 67

1 GGGTTTTACN CTGTGCNCCC CCAGCAGNGG TAACAACGCA GAGTACGCC TGTGTGCGAA GAAATAAATG
71 AATGGGTTTA AAATAGACGT GAAGATGGTG TAGAATACAG CAAGGACTTT GTCAACTGAG TAACTGCTGA
141 AGGGCCACAC ATAGATGAAA ATACACGATC CAAAGAATAA AGTGACCACA GTGATGTGAG CAGTCAATGT
211 GGAGTGGGCC TTCACCATGC TTACAGAGGA GCGATTCTTA ACTGTAATAA GTATTACAGT GTAGGANACA
281 ACCAANAGGA GAAAGGAACT CAGAGAAAGA AAGCCACCAT CTGCAACTAT TAGTAGGCTG ACAACATAAG
351 TGTCTATGCA GGCTAACTTN GTNGCTAGAG GAAGGTCACA GAAAAAACT ATCTACCTTA TTAGGACCAC
421 ANAATGGCAG ATTAACCGTG AATGCCAAT GGCTGGTGGT ATGGATGAAG CCCACAAAC AGGAAATGAG
491 GACGAGCAC ACACATACAC AGNAGCTCAT GATTGANATG TAGTGNGGAG GTTTNCTNTN GCTCATANCC
561 GTNTTNGCCA TNGNAACTNG GANACCATT TTAATTGCAG TGNGGAGNG AACATGAAAT N

SEQ. ID NO: 68

1 GTTANNCCNN TTTAATNCNA TGGAGCTCCA AAGCAGTGGT AACAACGCAG AGTACGCCCC CGATGTACTT
71 GTTCCTACTC TTTGCTGGAT TTGAAAACCT CCTCCTGTCC GTGATGGCCT ATGACCGGTT TGTGGCCATC
141 TGTCACCCCC TGCACTACAT GGTCATTATG AACCTCACC TCTGTGGACT GCTGGTTCTA GCATCCTGGA
211 CCATGAGTGC TCTGTATTCC TTGCTACAAA TCTTAATGGT AGTACGGCTG TCTTCTGCAC AGCCTTAGAA
281 ATCCCCACT TTTTCTNGA ACTTAATCAG GTCATCCAAC TTGCTTGTTT TGATAGCTTT CTTAATCACA
351 TGGTGATATA TTTTACAGTT GCGCTGCTGG GTGGAGGTCC CCTCACTGGG ATCCTTTACT CTTACTCTAA
421 GATAATTTCT TCCATACATG CAATCTCATC AGCTTAGGGG AAGNACAAGG CATTTTCCAC CTGTGCATCT
491 CACCTTTCAG TTGCTCCTTA TTTTATGGNG CAATCTAGGG GTGACCTTAG TTTTGTGNC ACCCGCAACT
561 CACACTTAAG TGCAACAACC TCAGTGATGT AACTGGGGT CACCCCATGC C

SEQ. ID NO: 69

1 GNGNNNCAG NTTANNCCCT GGACTCCAG TAGAGCTACN ANGANTNCGC CNAGCGCGCA NTTNNCCAG
71 GGTNTNTNTN GTATACCAA TGAATAGAAA ACAGACACCA CCTTGTCCCT GCCTAGCAAG TAGCTGGAGC
141 TGGGTCGCAA GTACACGAAA AGGGCTGTCC CAAACAGCAG AGTCACCACC ATCAGATGCG AGGCACACGT
211 GTTGCAGGCT TTCCATCGGC CCTCTGCTGA AGGGATCTTC AGGACCGCAG AACTATGTA ACCATAGGAG
281 ATAAGGAGTT GGAGGAACGA TGTTCTCCG ACGGTGACCA CCACGAGGAA ATTCACCACT TGACTGAGGA
351 AGGTGTCAGA GCAAGACAGA GCCAGGACTG GTGGGAGGTT GCAGAAGAAG TGTTTGATGA TGTTGGGTCC

421 GCAAAAGTGA AGCCTAAATA TGGAGCTGGC CTGGATCAGG GAGCTCAGGA AGCCACCAAC ATATGCCCCA
 491 ACCACCATGC GTGTACAGAG GCCCTGGGTC ATGATAGTGG GGTANAGAAG GGGGCTGGAG ATGGCTTGCA
 561 TATCGGTCGT ATGCCATAGC AGTCANGAGG AGGCACTCAA GACAGACCCA TGCCGACNAA GAAAT

SEQ. ID NO:70

1 GNNNNNTTTTA CCCCTGNNGC ACANAGCAGT GGTNACAACG CNCGAGTACG CCCCCTATGT ATTTTTTTCCT
 71 ATTCTGGACA CGCTACTCCT GACCGTGATG GCCTATGACC GGTTCGTGGC TGTCTGCCAC CCTCTGCACT
 141 ATATGATCAT CATGAACCCC CACCTCTGTG GCCTCCTGGT TTTTGTCAAC TGGCTCATTG GTGTCATGAC
 211 ATCCCTCCTC CATATTTCTC TGATGATGCA TCTAATCTTC TGTAAGATT TTGAAATTCC ACATTTTTTTC
 281 TGCGAACTGA CGTACATCCT CCAGCTGGCC TGCTCTGATA CCTTCCTGAA CAGCACGTTG ATATACTTTA
 351 TGACGGGTGT GCTGGGCGTT TTTCCCCTCC TTGGGATCAT TTTCTCTTAT TCACGAATTG CTTTCATCCAT
 421 AAGGAAGATG TCCTCATCTG GGGGAAAACA AATAGCACTT TCCACCTGTG GGTCTCACCT CTCCGTCGTT
 491 TCTTTATTTT ATGGGACAGG CATTGGGGTC CACTTCACTT CTGCGGTGAC TCACCCTTCC CAGAAAATCT
 561 CCGTGGCCTC GGTGATGTCA CTGNGGTCAC CCCCATGTTG ACCCTTTCAT TTACACCCTT AGCAAG

SEQ. ID NO:71

1 GNNNNNNNNN GTTNATNCCN NTTTTAATGC CANTNGAGNT AACACGCAN GAGTACNCCN NNGNGTACGC
 71 CCAGGGTTCA ACCNNTGAAT AGAAAACAGA CACCACCTTG TCCCTGCCTA GCAAGTAGCT GGAGCTGGGT
 141 CGCAAGTACA CGAAAAGGGC TGTCCCAAAC AGCAGAGTCA CCACCATCAG ATGCGAGGCA CACGTGTTGC
 211 AGGCTTTCCA TCGCCCTCTG CTGAAGGGAT CTTCAGGACC GCAGACACTA TGTAACCATA GGAGATAAGG
 281 AGTTGGAGGA ACGATGTTCC TCCGACGGTG ACCACCACGA GGAAATTCAC CACTTGACTG AGGAAGGTGT
 351 CAGAGCAAGA CAGAGCCAGG ACTGGTGGGG AGGTTGCAAG AAGAAGTGGT TGATGATTGT TGGGTCCCGC
 421 AAAAGTGAAA GCCTAAATAT NGAGCTGGCC TGGATCAGGG GAGCTCAGGA AGCCACAACA TATGCCCCAA
 491 CCACCATGCG TGTACAGAGG CCCTGGGTCA TGATAGTGGG GGTNGAGAAG GGGGCTGGA GATGGCTGCA
 561 TATCGGTCGT TGCCATAGCA AGTCAGGAGG AGGCACTTCA GACAGACCCA TGCCNCNAAG AAAAAAACT
 631 GNC

SEQ. ID NO:72

1 GNNNNNNNNN NTTNNNNCN TNACTCCNGC AGTGGTAACA ANNANTACGC NCAGCGCGCA GTTAACCCTC
 71 ACTAANGGTA ANNTNAGCTG GAACACATCA NTACGNTCAN GNNNGCNCNA TGACCGGTTT GTGGNCATNT
 141 GTCACCCCTT GCACTACATG GGTCAATTATG AACCTCACC TCTGTGGACT GCTGGTTCTA GCATCCTGGA
 211 CCATGAGTGC TCTGTATTCC TTGTACAAA TCTTAATGGT AGTACGGCTG TCCTTCTGCA CAGCCTTAGA
 281 AATCCCCCAC TTTTCTGTG AACTTAATCA GGCATCCAAC TTGCTTGTTT TGATAGCTTT CTTAATCACA
 351 TGGTGATATA TTTTACAGGT TGGCTGTCTG GGTGGAGGTC CCCTGACTGG GATCCTTTAC TCTTACTCTA
 421 AAGATAATTT CTTNCATACA TGCAATCTCA TCAGCTCAAG GGGAGTCAA GGCATTTTTT ACCTGTGCAT
 491 CTACCCCTCA GTTGCTNCTT ATTTTATGGN GCAATCCTAG GGGTGACCTT AGTCTGGTG GCACCCGCAA
 561 CTACACTCAA TGCACAAGCT CAGTGATGTA CACTGTGGCA CCCATGCTGA ACCN

SEQ. ID NO:73

1 GTNNNNNNNN TTGATTNCCA TTGGAGCTCC AAAGCAGTGG TAACAACGCA GAGTACGCCC CCTATGTATT
 71 TTTTCTATT CTGGACACGC TACTCCTGAC CGGGATGGCC TATGACCGGG TTGNGGCTGG CTGCCACCTT
 141 CTGNANTATA TGATCATCAT GAACCCCCAC CTNTGTGGCC TCCNGGTTTT TGNCACCTGG CTCATTGGTG
 211 TNATGACATN CCTCCTCCAT ATTTCTCTGA TGATGCATCT AATCTTCTGT AAAGANTTTG AAANTNCACA
 281 TTTTTTTNTG CGAACTGACG TACATNCTCC AGCTGGCCTG CTCTGATACC TTCCTGAACA GCACGTTGAT
 351 ATACTTTATG ACGGGTGTGC TGGGCGTTTT TCCCTCCTTG GGATCATTTT CTTCTTATTC ACGAATTGNT
 421 TTNATCCATA AGGAAGAATG TCCTCATNTG GGGGAAAACA AATAAGCACT TTNACACCTG TGGGNTCAA
 491 CQTCTCCGN CGTTTCTTTA TTTTATGGGG ACAGGCATTT GGGGTCCCAC TTTACTTTTT GNGGNGACTC
 561 ACCCCTTCCA GAAANTTTT CGTGGGCNTC NGGGATGTAC ACTGGNGGCA CCCCATGTT GAACCTTTT

FIGURE 2

SEQ. ID NO: 111

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ggtcccntcg ngatatnctt naccctctga tgcgtctcga ggggcccggca ggggtgatgga 60
tatctgcaga attcgccctt ctgttacgca ggaatatata aagggggttac tgagggaataa 120
ataaatgggt tactgaggaa taaataaatg ggttactgag gaacaaatac atagggttga 180
aagaactgta aaatagaaaa aggaccttnt gctgctcctc aggatggcgg nacttagggg 240
ccatgtacat gacgatgnng ctgccnntna agagtcaccac tntctancng cctcagcccc 300
ncttttttnt caccnnncnt ntttntctnc cctcttnnnc tcttttcttc ctattccccc 360
cccttccnct cctccctttt gcntnaccat tgnccctnat ccttttaatt ccnctnntcn 420
tctccctctt attccttcnn tnttcgnctt cantctctnc ctctttctcc ccncttttct 480
ctctctctnt ctctctctng tcctctctngt tcnttctctt ncctanttcc ctctancctt 540
ntcttattnc tctctatnc cctctcatct cactctctnt cctctctntn tactttnctc 600
nnctcttccn ctccgtctnc cctcttctct tcntnacgcc acccctcnnn cntnctctct 660
ntctctctct cactctctcc tctccctnch cntcactntt ctcnccctct acntcctatn 720
ctcnctttct nctttnactt tgtcacgctc tctctctctc ctctacgcac nttttatctc 780
ttatctcnch catcnccctc nnttctncac nctattnact cttttctcnc atactntatn 840
ctcctntcnh cttnatcnh ctcccttctn tnancnntc actgcn 886

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SEQ ID NO: 112

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gctgctcgag cngcgcagcg tcggcagtgt naggggnatn tgccnnnnntn gcnnttagat 60
nanaggnntn agtatggggg tgaccacagt ggtacataac tgaggctgtt gcacttgagt 120
gtgagttgcg ggtggcagca gaactaaggt acaccctag gattgcacca taaaataagg 180
agacaactga gagtgagat gcacaggtgg gacacgctt gtacttcccc tgagctgatg 240
agattgcatg tatggaagaa attatcttag agtaagagta aaggatccca gtcaggggac 300
ctccacccag cagcgcaact gtaaaatata tcaccatgtg attaagaaag ctatcagaac 360
aagcaagttg gatgacctga ttaagttcac agaaaaagt ggggatttct aaggctgtgc 420
agaaggacag ccgtactacc attaagattt gtagcaagga atacagagca ctnatggtcc 480
aggatgccag aaccagcagt cacagagggt gngggtttca tantgncctt gtagngtcag 540
cnnngacna gatggccnca aaccgntctt nggccctcac gncctggna ggnggttttc 600
tantccacca cnnntnttct nannc 625

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SEQ ID NO: 113

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catgcnngag caggctcgag cgccggcagn gtgagggata tctgcagaat tcgcccttcc 60
tatgtacttt ttctgagcg tatacacaat cccatcatgt actggggaga agncagacca 120
tatcattnac aagctgnctt tngcagatgn actttgnitt ctcatagagc tgcncagagt 180
acttctctct ggcagccatg gcttatgacc gctgtcttgc catctgctat cctttacact 240
acggagccat catgagtagc ctgctctcag cgcagctggc cctgggctcc tgggtgngtg 300
gtttcgcgcn cantgcagcg cccacagccc tcagnagcgg tcttgetctt ctgngncccc 360
cgtgccatta accactnctt tngcngcant gncnccctga ttgtcttgtc ctgccacca 420
nacagcagna nancntgngn cnnttngatc gctgntncgc tctcngntct cactccttcc 480
cacctttnc ntcgcattcc nntntccnnc tgcncctcct gncnntcnn tctcctcttc 540
tnaacgcgtc ctccgannng nctnnatgnt cgtctcntnn ntgngcnng ncagcnnnnn 600
nnccannnn tngtgcgcc gctcc 625

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SEQ ID NO: 114

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gnttaagccc tnnccctctn gangcatgct cgagcggccg ccagtgtgat ggatatctgc 60
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catagaagag accaaagaac ttgcccctcc ctggggcata cggatttttg ggctggaggt 180
agacagcnat gactgagctg tagaagagg tggaccacag gagatgggag gacaggtcc 240
caaaggcctt tctccatgct gtggcagagt taatcctcag cactgcctgg gcagtggctc 300
cataagaggc aaggatgagg ctgagaggca caaccacgaa gatgacactg gacacagcca 360
actggatttc attgnaggag gcatctccac aggagagtnc gnatcagaga tgggancctc 420
acataaaaaa gtcactctac tgntgggtgg gacagaatgn ccatgtggag gntnnatgtn 480

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cgntennac ctcttatttt tnttnccct ttctttcgct cnntcccnt tntcccnct 540
cgccantcc atnncntct ntcnntttt ttntntnacc ntntntcat ntctctctt 600
tattctcttt ctcttgntc tccctctctt ctctntttcc canctctccc g 651

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SEQ ID NO: 115

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ggntctcggt acaanacttg gccctctaga tgcattgctg agcgggcgcc agtgtgatgg 60
atatctgcag aattcgccct tccaatgtat ttattcctgt tatttgaga cctggagagc 120
ttctctcttg tggccatggc ctatgaccgc tatgtggcca tctgcttccc cctgcactac 180
accgccatca tgagcccat gctctgtctc gccctgggtg cgctgacctg ggtgctgacc 240
accttccatg ccatgttaca cactttactc atggccagnt tgtgcttntg tncnnacna 300
ttgttgntnc cccactnnnc tntgtnntna gtctnctctn ccntnnactg ctctcctct 360
tntccnnga gtccctcnggn nncgtngtgc nttnccgcn tcaattgcan tncnnctc 420
atcctttctt tantntcca tntnttcaact nattnctctt tatccnctnt ntncctctcc 480
anctcctnct tagcttactn tttctgtctc tccngngctc ancttttctn ccataatntc 540
ttctctctn tntctctcnc tnnnncccn nntctctgt ntctctgctc cntcttnacg 600
tctntnctt tatttantnt ctncnctctn tctcngctc cancgngta ccngccctat 660
nnctctctcc gannntgntc atggcatctn cacattnngc cctactatnn ncgatctatn 720
ttcncgncat ntattnaca tccacntgca ctctactctn ctctctancc nccgtacatc 780
gennctacng ntgncnctn nccgtctctn cggccnctat nntccactt tntctnngtc 840
ccctctccg 850

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SEQ ID NO: 116

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gatgcatgct cgagcgcccg cagtgtgatg gatattctgca gaattcgccc ttccaatgta 60
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atccatccgt aactccctga ctgcagaag ctccatctct tatcttggtg gtgtggctca 180
agcctatttt ttctctgcct ttgcatctgc tgagctggcc ttcttactg tcatgtctta 240
tgaccgctat gttgccattt gccacccct ccaatacaga gccgtgatga catcaggagg 300
gtgctatcag atggcagtc ccacctggct aagctgcttt tctacgcag ccgtccacac 360
tggaacatg ttccgggagc acgtttgcag atccaatgtg atccaccagt tcttccgtga 420
catccctcag gtgttggtcc tgggttctct ngagggtttt tttgtagagc tttgaccng 480
ccctgagcct caatgcttgg ntctgggatg ctttattccc atgatgatct ccnattttcc 540
anatctctn aanggggctc nagaatccct tnaggaccag antcnagcta aaagcctttt 600
cccnctgct tccccccacg 620

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SEQ ID NO: 117

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tggcncctng atgcatgctc gagcgggccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta tttgttcctg ttatttggag acctggagag ctctcctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgctgac caccctccac gccatgttac 240
acactttact catggccagg ttgtgtttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgct tgcctgtctg aagctggcct tctctgacac tctagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgcac cccattccta ctnatccttg ggtctatgc 420
aagaattgtc tctccatcc tcaaggctcc ttcttctaag ggtatctgca aggccttctc 480
tacttgtggc tcccacctg tctgnggtgt cactggttct atggaaccgt tattggtctc 540
tacttatgct cntcagctaa tagttctact cttaaaggaca ctgcatggct atgatgtaca 600
ctgtgggtgac ccccatgctg aaccctt 628

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SEQ ID NO: 118

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gatgatgctc gagcgngcgc agtgngatgg atatctgcag aattcgccct tcccatgtat 60
ttgttctga gcaacctctc ctctctggag atttggata ccacagcagc agtgcccaaa 120
gcactggcca tctactggg gagaagacag accatatcat ttacaagctg ccttttgag 180
atgnacnntg ttttctcant angcctaca gngnncatgt ttncgcnngc cntgacttat 240
gacgcgcntn cncnntatc nnnntntnct ntacnctac ttctcatna tntgncntn 300

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nnttcnecntn tggennctcn nntcneggnnc ttncctntgn negtentenc ccttnggect 360
gcatctctnc ntnttcctnn cennegnnct ntctttcett cntacctnt tctgtntnn 420
tccctccct ctctgnntgc nntcnenncn catctnnntg ntctgatenc tntctnnnt 480
ccatcnngtn ctnttctctc gtntcttctn cncgcncct gcatcactgn gcattatatn 540
cncngtctca tnnctatctt ccgtntctgt cnccttctct ctatgcnega cgtentnntn 600
tactatcgte ntentcnnat tnnngnctgt tccnnngenc ccgnnctcc anntactctc 660
cangntctnc ctnttcctnt ncnctgtcta attcnnctnt accgntctn gntctntcct 720
cgtcnntccc nnttctctcc nctcnegnnn cnttccagct ntcnanttct antnngnnn 780
cnc 783

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SEQ ID NO: 119

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tatgtatttc ttcttgccca acctgtcett ctggagacc tggtagatct ctgngactgt 120
gcccaggtta ctgtttagtt tttggctctgc gaacaacage atctctttca cactctgtat 180
gatacaactg tacttcttca ttgctcncat gngcacagaa tgcgtgcttc tggccgccat 240
ggcctatgac cgnatgtgg ncatctggcg cccactccac taccacaacca taantgagcc 300
atgggctcct gctccnnct cgtntnnna tanngaaccn acagngtagc gncanctccc 360
tgtncgagaa tctacttcat cntnctgcct tanntntgt gggcccaatg tgntaanca 420
cttngntctg nggacatttn ctccagnant tnaantctct tncctgnaca aganactgtt 480
cnttancttg annatnttcn ggnacattnt tcctanggnn ttggnacgag cntntctanc 540
accngcactn cncantaant gctncngttc tantcngtgc cattctntgt nctnccctt 600
tcatngcntn nctcccneg aaagcnaant aagtngngt cttnacttcc gccccccacn 660
ncatcncant ggcc 674

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SEQ ID NO: 120

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ggccctctag atgcatgctc gagcggccgc cagtgtgatg gatatctgca gaattcgccc 60
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cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctggg gcgctgtcct ggggtgctgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgtttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgtg aagctggcct tctctgacac tcgagttaat gaatgggtng 360
atatttatca tngagggtc cattcttgc atccattcc tactcatcct tgggtcctat 420
gcgagaattg tctcctcct cctcaaaggc ccttcttct aanggtatc tgcaaggcct 480
tctctacttg gtggctcccc cctgntctgt ggtgtcactg ttcctattgg aaaccgntat 540
tgggactcta ctatgctca tcangctaag agttttactc ttangggaca ctgncaatgg 600
cctntgaagn taccctggg gtggacccc atnntngaac ccc 643

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SEQ ID NO: 121

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ggccctctag atgcatgctc gagcggccgc cagtgtgatg gatatctgca gaattcgccc 60
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cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctggg gcgctgtcct ggggtgctgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgtttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgtg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgc atccattcc ctcactcttg ggtcctatgc 420
aagaattgnc tcttccatc tcaaggncct ttnttctaaa gggatctgc aaggccttct 480
ctanttggtg ctcccacct gtcttgggn tggcactgnt tctaattgga accggttaatt 540
gnancnctna cnttatgctc natcaactta aatagtttct nactttnaaa gggaccactn 600
ntcattggct tanggatngn ncnttggtt cntggaaatc ccnatcattc ttacnng 657

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SEQ ID NO: 122

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ataattccca	atatgctaga	tcatattagc	tcaggaatta	agctgatttc	ttatggggag	180
tgtctgacac	aactctattt	ctctggccta	tttgagatc	tggacaacaa	ctttctcctg	240
gctgtgttgg	cccttgaccg	ctatgtggcc	atcagccatc	ctctccatta	tgccctaacc	300
atgaactccc	aacgctgtgt	cctgttgggt	gctgtgtcat	gggtgatcac	tattttacat	360
gccctagtgc	ataccctcct	agtgaccagg	ctttccttct	gtggtccaaa	tattatccct	420
cacttcttct	gtgatctggc	cccactcctg	aagctggcct	gctccagtac	ttgtgtcaat	480
gatctggtgc	tcctccttgt	ggcaggaaca	ctgctgaatg	cgccttttgc	tgcattctta	540
tgnccacttt	ttacattgca	ttggccatcc	tgagaattga	ttcccnagg	ggtatgcaaa	600
gggcccttnt	ccagctcnc	nn				622

SEQ ID NO: 123

gcgncgcagt	gtgatggata	tctgcagaat	tgcaccttcc	aatgtatttg	tttctgttat	60
ttggagacct	ggagagcttc	ctccttgttg	ccatggccta	tgaccgctat	gtggccatct	120
gcttccccct	gcactacacc	gccatcatga	gccccatgct	ctgtctcgcc	ctggtggcgc	180
tgtcctgggt	gctgaccacc	ttccatgcc	tgttacacac	tttactcatg	gccaggttgt	240
gtttttgtgc	agacaatgtg	atccccact	ttttctgtga	tatgtctgct	ctgctgaagc	300
tggccttctc	tgacactcga	gttaatgaat	gggtgatatt	tatcatggga	gggtcatttc	360
ttgtcatccc	attcctactc	atccttgggt	cctatgcaag	aattgtctcc	tccatcctca	420
aggtcccttc	ttctaagggt	atctngcaag	gccttctcta	cttgcggtc	cacctgcctg	480
tgggtgctact	gttctatgga	accgttattg	gtctctactt	atgctcatca	gccaataagt	540
tttactctaa	aaggacactt	gtcatggnt	atgatgtacn	ctgtggngac	ccccatgctn	600
aacccnttn						610

SEQ ID NO: 124

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cgccttctt	tattcctgag	tgaatatatg	agggggttgg	cactgctgtt	aagagtggac	120
agggaaatgg	aaactagacg	aacgtgacaa	atccacgtgg	atccagaaaa	ataggaatca	180
ctgaatgcc	aagggcaggt	cacagaggag	gaagaccagc	actctgagca	ggatggctcat	240
gtacagcctg	gtcaagggca	tcttcgggga	tcacaaaagg	atcctgacca	gcagaaccgg	300
gctggacccg	cagagaacca	cacataaaaa	aatcagccat	gtgactgtga	tgaaatctga	360
tgtttcacac	caaacagaat	caagcaccac	tagacaggaa	gccacagaac	atccattcca	420
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gnttgcttnt	cgnnncccta	ncatagcctt	ngctcctgtn	nancttgac	nattggncct	600
cnccccacng	gcttaannnt	ctcnnngcgc	atttanancg	tnatnntact	tcccttgtcg	660

SEQ ID NO: 125

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ttcctatgta	cttcttctctg	ttatttggag	acctggagag	cttctcctt	gtggccatgg	120
cctatgaccg	ctatgtggcc	atctgcttcc	ccctgcacta	caccgccatc	atgagcccca	180
tgtctgtct	cgcctgggtg	gcgtgtctct	gggtgctgac	caccttccat	gcatgttac	240
acactttact	catggccagg	ttgtgttttt	gtgcagacaa	tgtgatcccc	cactttttct	300
gtgatatgtc	tgtctgctg	aagctggcct	tctctgacac	tcgagttaat	gaatgggtga	360
tatttatcat	gggagggtc	attcttgtca	tccattcct	actcatcctt	gggtcctatg	420
caagaattgt	ctcctccatc	ctcaaggctc	cttcttctaa	gggtatctgc	aaggccttct	480
ctacttgngg	ctccacactg	tcttngngng	cactgttcta	tgggaaccgg	tattggtctc	540
tacttaatgc	tcataagct	aatagttcta	ctctaaagga	cactgncatg	gctatgatgt	600
acactgtggt	gaccccnat	gctgacccat	tc			632

SEQ ID NO: 126

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tctagatgca tgctcgagcg gccgcagtgt gatggatata tgcagaattc gcccttccaa 60
tgtacttggt cctggcagcc atggcttatg accgctgtct tgccatctgc tatcctttac 120
actacggagc catcatgagt agcctgtctc cagcgcagct ggccctgggc tcctgggtgt 180
gtggtttcgt ggccattgca gtgcccacag ccctcatcag tggcctgtcc ttctgtggcc 240
cccggtccat caaccacttc ttctgtgaca ttgcaccctg gattgccctg gcctgcacca 300
acacacagggc agtagagctt gtggcctttg ngattgctgg tgtggttatc ctgagttcat 360
gcctcatcac ctttgtctcc tatgtggaca tcatcagcac catccttcag gatccccctt 420
gncagtgccg ggagnaaaag ncttttccac gtgtcctcgt cntctcnncg nggtgctcna 480
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aaactccttt natntcaactn ttangggaac naggggcggn ac 642

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SEQ ID NO: 127

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ttacacaact caccttcttc aagaatgtgg aaantataa tttttttct gtgacctatc 180
tcaacttctc aaccttgccg gttctgacag catcatcaat aacatattat gtattttaga 240
tatecctata tttggttttc ttccatttnc agggatcctt ttgncttacc atanaattgt 300
cctcctccat tccaagaatt ccattgncag acgggacgna tnangccttc tctacctgn 360
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gccagencen nangntcenc cctctcctt cntgtctnet cnetcctntt cttcntntcc 600
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cgctacgac ctcctgtnc ncnccgg 688

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SEQ ID NO: 128

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atatgtcac tgacttcttc tgggagcaga agaccatata atttgtgggc tgtgctgctc 180
agtttttttt ctttgtcggc atgggtctgt ctgagtgcct cctcctgact gctatggcat 240
acgaccgata tgcagccatc tccagccccc ttctctaccc cactatcatg acccagggcc 300
tctgtacacg catggtggtt gnggcataat ttggtggctt cctgagctcc ctgacccagg 360
ccagnnccat atttaggctt cacttttgcg gacccaacat catcaaccac ttcttctgcy 420
acctccacca gtcttggtc tgtcttgctc tgacaccttc cttnagtcaa gncgncgaat 480
tntcccgtgg tgntcacntg tcnngaggaa acatcgnttt cctccaaccc cttantctcc 540
cangggntac catagngtct gcgngtccct gaagaatcct tttngccaan cgggcgaatn 600
gnaagccctn ccaccgcc 619

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SEQ ID NO: 129

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gcggcgcagt gtgatgntat ctgacgaatt cgcccttccg atgtatttat ttctaagcaa 60
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cttctgggag cagaagacca tatcatttgt gggctgtgct gctcagtttt ttttctttgt 180
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ggtngcgccn tatgntngtt gntcnctng agtccctga nccannnctn ntcaentatt 360
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ctccancag ttcttggtt ttctgcnntc gctcncgnc nnccttatnc ttnangntca 480
cncctganet gcnnttctt ccangcngc ncgncancc cgtctntct gnngaancct 540
ttncatnct gctcnatnct nctctcatn ntctctantn ctctcennct cncgctcnnt 600

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nncttncnct	ctnaacctnt	cnnaectca	cctnngatat	cctcncgntc	tttcgncntc	660
nttcnctgtc	cgannctctc	anacnctcc	ctanncg			697

SEQ ID NO: 130

ctctagatgc	atgctcgagc	ggccgccagt	gtgatggata	tctgcagaat	tcgcccttcc	60
tatgtattta	ttccttagcc	acttggccct	cactgacatc	tccttttcat	ctgtcactgt	120
ccctaagatg	ctgatgaaca	tgcagactca	gcacctagcc	gtcttttaca	agggatgcat	180
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tgggcanatn	tgggggtcac	cattctncag	anttcttta	ccagggcatt	tgcaangcct	600
tggccacttg	tggnnccenc	tcncg				625

SEQ ID NO: 131

ttggcctcta	gatgcatgct	cgagcgccgc	cagtgtgatg	gatatctgca	gaattcgccc	60
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tcgggttgcg	gaaggaataa	atacatcggg	ttgcggaagg	aataaataca	tcgggttgcg	180
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cgtaaggaat	aaatcattgg	gttgcgtaag	gaataaatca	ttgngttgcg	taaggaataa	360
atctttgtgc	tggtaccgat	ctatcatggg	gttacgaaag	ggaagaaata	cattggaang	420
ggcgaattcc	agcacactgc	cgnccgctac	tagtgggatc	cganctcggg	accaagcttt	480
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gaccnagctt	gncttccttg	cgtnaanttt	cnttattcct	cctntntntc	ttctccccc	600
ncanaatnnt	nnccnngntn	ancacncann	ttntatannc	ctngngctcc	cctantc	657

SEQ ID NO: 132

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tcacacctaa	gctcttgggt	aacttctctg	tctctgacaa	gtccatctct	tttgagggtc	180
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ccatggccta	tgaccgcttc	ctatccatct	gtcaaccctc	ccattatggg	tctatcatga	300
ccagggggac	ctgtctccag	ctggtagctg	tgctctatgc	atttgggtgga	gccaaactccg	360
ctatccagac	tggaaatgtc	tttgccctgc	ctttctgtgg	gcccaaccag	ctaacacact	420
actactgtga	cataccaccc	cttctccacc	tggttctgtc	caacacagcc	acagcaagag	480
nggncctcna	tgntttttct	gntctggcac	ccttctggcn	gctgcaggca	ttctcacctc	540
taccggcttg	ggcttggggg	ccaatnggga	ggatgcgcct	caagaacagg	gagggagaaa	600
ggactcccca	cttntgcctc	ccnn				624

SEQ ID NO: 133

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ttgcccctcc	cttgggcata	cggatttttg	ggctggagggt	agacagcaat	gactgagctg	120
cagaagaggg	tgaccacagt	gagatgggag	gagcagggtc	naaaggcctt	tctccatgct	180
gtggnagagn	taattctcag	cactgcctgg	gcagtcggct	ncataagagg	caaggatgag	240
gctgagaggc	acaaccacga	agatgacact	ggacacangc	caactgtatc	cattgttagga	300
ggnatctcca	caggagagtn	gaatcagaga	tgggacnttc	acattaanaa	gttatttatn	360
tgctggcggg	nacagatgcc	caagcggnan	ggngntatgg	tnctggncna	ttnttctgct	420
canaccatt	atctcangcc	acatgtatnt	cagcntttta	ntcncnntnt	nagnttagtc	480
tngntgntnt	ncnnnattnn	ccnntctttn	tcctntcann	tatcattntc	attccttncn	540
ncncanantt	atggnnccnc	cgnacncnct	cngtnactcc	cctnnngncg		590

SEQ ID NO: 134

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gnntnnnnnn ntgttancct cgtccctcta gatgcatgct cgagcggccg ccagtgtgat 60
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tgatctctct tgcttttccc cacacactgc aacctctgcc tccacattca agtgattctc 180
ctgacctcagc ctcttgagta gctggaatta cagatgtgag ccaccatgcc tggcctgtcc 240
agatgttttt gaaacaaccc ccaccagcac tggagggagt caagggaga caagccaggc 300
atctgagctc ctctgtctct gcctttcctt ctactgtcc ccagggtaac ccgtcaccac 360
ccccatcacg aacctcttca tctacacatt acgtaacaag ggcgaattcc agcacactgg 420
cggccgttac tagtggtacc gagctcggtt ccaagcttga tgcatagctt gagtattcta 480
acgcntcacc taatatagctt ggcgtnatca tngncccnag cttgntttct gtgtgaaatt 540
tgntatccgc tcacaaattc cacacaacat acgagccnga agcaataagn nntaaagcct 600
gnggtgccna angagnagac taactcacia ttaattnctt tggctnactt gcccc 655

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SEQ ID NO: 135

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ttnggccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcagaattcg 60
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cagcagtgcc caaagcacgg gccatcctac tggggagaag tcagaccata tcatttacia 180
gctgtctttt gcagatgtac tttgttttct cattaggctg cacagagtac ttctcctctg 240
cagccatggc ttatgaccgc tgtcttgcca tctgtctatcc ttacactac ggagccatca 300
tgatagacct gctctcagcg cagctggccc tgggctcctg ggtggtgtgg ttctgtggcc 360
attgcagtgc ccacagccct catcagtggc ctgtccttct gtggttcccg tgccatcaaa 420
cacttcttct gtgacattgc accctggant gccctggcct gcaccaacac cacaggcagn 480
aagagcttgt ggcctttgng aatcgcttgn tggggtctac cttngtcat gccctnatca 540
ccntttntcn nctatgnngt acantcatta agnccaatc nctcatggga tccccctttg 600
cnagtggccc ggcngcncaa ngncctnctc cccgtncen 639

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SEQ ID NO: 136

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tccatcccca aaatgctggc caacattcat acccagagtc agatcatctc gtattctggg 180
tgtctngcac agctatattt cctccttatg tttggnggcc ntgacaactg cctgctggct 240
gtgatgccat angaccgta tgtggccatt tgccaaccac cccattacag cacatctatg 300
agtccccagc tctgtgcact antgctgenc gtgtgctgng tgcnanccan ttgtctgctt 360
gtgacacatn ctgttnccnc ccccnegngg nctctttnnn ccgnaccnc cctacaantc 420
cntatcannt tcngetnccc tttcttctcc ccccnnttct tncnccctc ctcnnnccca 480
ctttcttctc tcnccntnct canatnatca gtcnacctc nccttctttt cttcactnan 540
tctctctnct cccnctcacc ngntngtcta gtctgcegtc gccccntcgc tatcnctncc 600
ccccctctcg cntccctga tcgtcctngt ctacctcnc catctnatcc ctcc 654

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SEQ ID NO: 137

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ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tcgcccttcc 60
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gcccaaagca ctggccatcc cactggggag aagtcagacc atatcattta caagctgtct 180
tttgcatagc tactttgttt tctcattagg ctgcacagag tacttctcc tggcagccat 240
ggcttatgac cgtgtcttg ccactctgcta tcttttacac tacggagcca tcatgagtag 300
cctgctctca gcgcagctgg cctggtgctc ctggncgtgn ggcttngtgn cnttgngcn 360
cctctagcnc tcatgnnnnc cttgccttnt gggnccntgn nnatcaccct nttctctgt 420
nacacttgta cctcnegnet tgccctnnnc tgcttctaan tccctnngtt gtantnctn 480
gccttntctc ccttctgctn gttnatcttn anntnctngc ntctntgncc ctctccttcc 540
ttngacccct ntanncnnc tcttcttcnn anntccctc tatcncccg nttnccctcn 600
ntgtcncccg antangntac ntntcacnnt ntntcnctn ctctcctaac tcttnccg 658

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SEQ ID NO: 138

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cagtgcctcaa agcactggcc atcctactgg ggagaagtca gaccatatca tttacaagct 180
gtcttttgca gatgtacttt gttttctcat taggctgcac agagtacttc ctccctggcag 240
ccatggctta tgaccgctgt cttgccatct gctatccttt acactacgga gccatcatga 300
gtagcctgct ctacagcgag ctggccctgg gctcctgggt gngtggnntc gtggccantg 360
tagtgcctac agccentatc agnggcctgt ccttttggtg ncncctgtnc catcaacccc 420
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nngnttncnn gnctcggcnc cccctttgac ntantncntt gntgngcgct tatncntgcg 540
tttaatgncc ttaatnaaac tctcncctct catgttnttc ntttntntng gnaccaantc 600
ttcnaannna cccctttttc catnnncncg tctacntcnc tctcnccttc ntcgngtttn 660
nnngtcnncc 670

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SEQ ID NO: 139

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aagcactggc catcctactg gggagaagtc agaccatata atttacaagc tgtcttttgc 180
agatgtactt tgttttctca ttaggctgca cagagtactt cctcttgcca gccatggctt 240
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ctnagcgcag ctgnccctggg ctccctgggtg ngtggttcng ngccattcag cgcacacagn 360
cttcacagct ggncttgtn cttctgngccc ccgncatcn aaccantttc ttctgngana 420
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ntggcncncn tgnntcgcnt ngtnnccng ntancngnc tnnacgtcct ttcnnacact 540
ttnnctctat gttntcaacn tcncngncta ttcgctcang atanccactc ttcannent 600
cggannnnnta nnccttccnn acctctttc cntnc 635

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SEQ ID NO: 140

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cagcagtgcc caaagcactg ggccatccta ctggggagaa gtcagacatc atcatttaca 180
agctgtcttt tgcagatgta ctttgttttc tcattagget gcacagagta ctccctcctg 240
gcagccatgg cttatgaccg ctgtcttgcc atctgctatc ctttactata cggagccatc 300
atgagtagcc tgctctcagc gcaagctggc ctgggctcct ggggtgtgtg tttcgngngc 360
cattgcagng cccacagcnc tnatcagtgg gctgtccttt ctgtgggccc ccnggccat 420
tcaacccacn tttctttttg nggatattgg caacccctg gnatttgnc cctnggccct 480
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cnttctatg ggngnnccct tnnattcnag caccacancc ttanggggaa ccnccttttt 660
gtcaagtng nccggtann naaaagccnt nttcnnntg cccccccg 709

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SEQ ID NO: 141

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agcagtgcct aaagcactgg ccactcactt ggggagaagt cagaccatat catttacaag 180
ctgtcttttg cagatgtact ttgttttctc attaggetgc acagagtact tctcctggc 240
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gagtagcctg ctctcagcgc agctggccct gggctcctgg gtctgtggtt tcgtggccat 360
tgaagtgncc acanngcctc atcagntggc cntgtccttc tgcnncccc cgtnnccatn 420
nncacttctt tcgtgacatt gccannctnn tnttgccctn gtccttncnc natcatccat 480

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ggcngttngn gctgttgcc ctttcgctca cncngtctgc gccattctc nctgtnncaa 540
nngcctcent ctactctctg cnttctant antnnncct ctttntncc tnnantctnt 600
cctcgatctc ctttcangnc tccgctncac tgctcnctna acgtccnttt cttccctnnt 660
nntcnntnnc g

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SEQ ID NO: 142

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tgccctgtttc acttctgcct ccattcccaa aatgctggcc aacattcata cccagagtca 180
gatcatctcg tattctgggt gtcttgaca gctatatctc ctccttatgt tngngggcct 240
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gncnatttc nttttccn

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SEQ ID NO: 143

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caccacagac aggtgggagc cacaagtga gaaggccttg cagataccct tagaagaagg 240
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gacaagaatg agccctccca tgataaatat caccattca ttaactcgag tgtcagagaa 360
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ctttnaataa c

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SEQ ID NO: 144

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aagagggtga ccacagtga atgggaggag caggcccaa aggcctttct ccatgctgtg 240
gnagagttaa tctcagcac tgnctgggca gtggctccat aagaggcang gatgaggctg 300
agaggcaca ccacngaaga tgacactgta cacagccaac tgtattttat tgnaggnggn 360
atctccacag gngagnccaa tcagntgatg gntccnccc atttcanaag tcactntatn 420
tntntttgnc ngncacgang gtcctnnng agcngttctt gtccntctt nactatcgnt 480
tacntccct cntccctnt nttttctt cncctnctc ttctnttnc cntntccnt 540
gtncntnt atcttcccta ntntctt tntnctnt tngnnncct cctctntct 600
tncntccctc tcnantat cnettgnc cncnntnc c

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SEQ ID NO: 145

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gagatttgg ataccacagc agcagtgc aaagcactgg ccattctact ggggagaagt 180
cagaccatat catttacaag ctgtctttg cagatgtact ttgtttctc attaggctgc 240
acagagtact tctcctggc agccatggc tatgaccgct gtcttgccat cctgctatcc 300
tttactact ggagccatca tgagtgcen tgctctcagc tgcagctggn cctgggctcc 360
tgngtngct ggtttctcgc cctattntn ncnnnacnn cctantcng ncnctnctc 420

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ccctttgntc	tctacnctct	tnccgnantca	ctnnnatntc	tnntcacngg	cntcctcnnn	600
gatnttcncc	tncttactgc	tactctctnc	tatactnnnc	ttntntncat	anttcgtctg	660
ctnacnntc	tnctactent	tcccannenn	tcnctgtent	ctgactctcn	cctcntntnt	720
nnntcctcac	cnntacatg	gttccttntn	ntccatctcg	tcnntctctc	cnntatacgn	780
ttncatactc	nctaacttct	ctccatcatc	ntcacctntc	tttctttntc	cctngnc	837

SEQ ID NO: 146

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caatctgccg	accactccgc	tatgagaccc	tgatgaatgg	ccatgtctgt	tcccaactag	180
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gcctgccttt	ctgtggcccc	aatgggtattg	accacttctt	tcgtgacagt	tggcccttgc	300
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tgggtggtact	gggcccacng	gctctgacct	cagntttcta	ngcccgcatt	cttgccactg	420
ttctnagngc	ccnccnanngc	ttgccngagc	gaagcanaag	atnnntttca	cattgcgcac	480
tcggaantta	aagggggtgg	cgcnnccancn	nctgggnggc	ttcattctnt	ctttttactt	540
tnccannngn	tnntngctca	ntccctntnc	tntcncaat	cntnnnggcn	ctcntgntnn	600
gtanactgcc	nttaattnga	ccnctttccc	nacnccac			639

SEQ ID NO: 147

catagatgca	tgctcgagcg	gccgcagtgt	gatggatata	tgcagaattc	gcccttccga	60
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atggccagcc	tgcctttctg	tggccccaat	ggtattgacc	acttctttcg	tgacagtggg	300
cccttgctca	ggctttcttg	tggggacacc	cacctgctga	aactggnggc	tttcatgctc	360
tctacgttgg	tgttactggg	ctcactggct	ctgacctcag	nttcttange	ctgcattctt	420
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cnatcttaca	ggggtggcat	catctnangg	ggngnntgca	tccttnncta	ntnccnagg	540
tcccagctat	antccaaagt	nctnaaaaaca	ngancctcgg	nangannnct	nntattctac	600
ccttcttctg	aacctncc					618

SEQ ID NO: 148

cntagatgca	ngctcgagcg	ggcgccagcg	tgnngnanat	ctgcagaatt	cgcccttcca	60
atgtattttt	tctcactaac	ttgtctttcc	tagatctctg	cttcaccacc	agttctatcc	120
cccagctgct	tttcaatcta	ggcagcccag	gcaagactat	cagccacacg	ggctgtgcca	180
tccagctctt	catgttcctg	ggcctgggtg	gcaagagtgt	attctcttgg	cagccgtggc	240
ctatgaccgc	ttcattgcaa	tctgcaagcc	ccttcactat	tctgtcatta	tgcacctca	300
gctgtgctgg	aagttgggtg	ctgtggcccc	ggggtgttgg	actccncagt	tncttaggta	360
tgctcctcgn	gactatgaag	cttgtcacga	tgcggaagat	gtaagnttgc	ancntnccn	420
ttnttgngat	gccngcntcn	tataaaaanc	annctgggcg	ggtcacagtg	cttnngnata	480
gcattnnngc	nccttnatnn	catcnnattt	gcctngnngt	ccctcgttcc	cantntnccn	540
tcnttctntg	gcttancntt	ctncaccngn	ncttnccntn	ctactccntn	ttnttctntc	600
cttctanctc	tncatctttc	ttnccttcca	tcc			633

SEQ ID NO: 149

gatgcatgct	cgagcgggcg	ccagtgtgat	ggatatctgc	agaattcgcc	cttgttccta	60
agactatata	tgaatgggtt	tagcatcggg	ttgaaagaac	tgtaaaatag	aaaaaggacc	120
ttctgctgct	cctcaggatg	gcgggactta	ggggccatgt	acatgacgat	ggcgctgcca	180
aagaagagtc	ccactacgca	gaggtgggag	gagcaggtgg	agaaggcctt	tctgcggccc	240
tccccagact	ggatcctcag	gatggccgcc	aggatgtgtg	agtaggagac	cagcaccagg	300

cagagtggtc	ccaccaggat	gaacatgcag	gctgcaaaga	tgaccacctg	gttgagccag	360
gtatcagcac	aggccagcct	gaggacagac	aggatttcac	aagaagaagt	ggttgatttc	420
acgaggccca	canaaagggc	agtcttagga	tgaggntcac	atggaccata	gccaggaggg	480
agccacattg	tcccaggaag	ngntgnccag	agtgatgcag	acttttcagg	tcntgatgat	540
ngnnttattc	ggagagnntg	nnagacnggt	cancgttccc	gntcgtagga	caattancac	600
ccancngngn	ccttcantna	tgtc				624

SEQ ID NO: 150

gatgcatgct	cgagcggccg	ccagtgtgat	ggatatctgc	agaattcgcc	cttccaatgt	60
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agatgctggc	caacctctgg	ggcccaaaga	agaccatcag	cttcctggga	tgctctgtcc	180
agctcttcat	cttcctgtcc	ctggggacca	ctgagtgcac	cctcctgaca	gtgatggcct	240
ttgaccgata	cgtggctgtc	tgccagcccc	tccactatgc	caccatcacc	cacccccgcc	300
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catcatccac	cctccacttg	cccttctgtc	cccaccagca	gatagatgac	tttttatgtg	420
aggtcccatc	tctgattcga	ctctcctgng	gagataacctc	ctacaatgaa	atccagttgn	480
ctgtgtccag	tgtcatcttt	ggtggntgtg	cctctcagcc	tcatecttgc	ctcttatgga	540
gccactgccc	aggcnggggc	tgaggattaa	ctttgcccna	gccatggaag	aaaggtcttt	600
nggacctngn	n					611

SEQ ID NO: 151

gatgcatgct	cgagcggccg	ccagtgtgat	ggatatctgc	agaattcgcc	ctttctttat	60
ttcgaagagt	atacactagt	ggattgaaga	gaaacaaata	cataggaagg	gcgaattcca	120
gcacactggc	ggccgttact	agtggatccg	agctcgttac	caagcttgat	gcatagcttg	180
agtattctaa	cgcgtcacct	aaatagcttg	gcgtaatcat	ggtcatagct	gtttcctgtg	240
tgaaattgtt	atccgctcac	aattccacac	aacatacgag	ccggaagcat	aaagtgtaaa	300
gcctgggggtg	cctaagtagt	gagctaactc	acattaattg	cggtgcgctc	actgtccgct	360
ttccagtcgg	gaaacctgtc	gtgccagctg	cattaatgaa	tcggccaacg	cgcgngnaga	420
ggccggnttg	cgtattgggc	gctcttccgc	ttctcgctca	ctgactcgct	gcgctcgggg	480
cgtccggctg	cggcgagcgg	tatcagctta	ctcaanggcc	gtantacggt	tattencagg	540
aatnnggggt	taacgccngg	naaagaacat	tgtngnccan	angncaagcn	taatgccag	600
gaaccgntan	aacgntccc					619

SEQ ID NO: 152

ctcgagcggc	gcagtgtgat	ggatatctgc	agaattcgcc	cttcctatgt	attattttctc	60
cataatttat	ctattgccga	tatctgcttc	tcttccatca	cagcgcccaa	ggttctggcg	120
gaccttctgt	ctgaaagana	gaccatctcc	ttcaatcatt	gtccactca	gatgtttcta	180
ttccacctta	ttggaggggc	ggntgtatnt	nnccntggt	ncccnatgcg	cctncttttc	240
ccntntcntt	tcnantcttt	ncgcctcctc	tcatgcnnnc	ccttcctctc	tattcntgtc	300
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ctgtctgtcg	tacctnttnc	ntnctgtgtc	tgcgngntca	tncacnntct	caancgtctn	420
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agntnntctc	ncacnncnat	nttcttcccta	cncttctcnc	tgtcncacag	atctntcnct	720
nctctgctct	cgttgntccc	cctgncactn	cgcaatcnca	catatncgtc	tctcttctnt	780
cgccacttat	ntngcanctt	tctctgcggt	nctctncgat	ntccctcenc	nntctcncnn	840
ctnatnatcg	nttattcnaa	tcatactccg	tactgtttct	gtntcttntt	cntgnncnct	900
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SEQUENCE LISTING

<110> DigiScents; Yeda Research
Bellenson, Joel; Smith, Dexter; Lancet, Doron; Glusman, Gustavo;
Fuchs, Tania; Yanai, Itai

<120> OLFACTORY RECEPTOR SEQUENCES

<130> 422852000200

<140> 06/158,615

<141> 1999-10-08

<160> 2747

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 613

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 8, 11, 17, 28-29, 34, 40, 48, 67, 71, 613

<223> N can be any nucleotide

<400> 1

ggnttatncc	ncgttgnact	gcagggggnnc	aacncacagn	acgcccgntg	ctgaggctat	60
aaatgancgg	nttaaggaga	ggagtgaaga	cagtaaaaaa	acacagagat	aaatttatca	120
attgggaagc	tttcaaaggg	ccaaataagg	atgaatatta	atgggccaaa	gaagagaagc	180
acaacagtaa	tgtgggcaga	cagagtggga	agggccttgg	acatcccatc	agaggcttgg	240
cgatgcacag	tagcaaggat	gatatgttca	gaaatgagca	aaaggaggaa	acacataagt	300
gagagcagac	cactgttagt	gagcaccagt	atctcaaaac	cataggtgtc	taagcaggca	360
agcttgatca	ctaggaggag	gtcacagaaa	aaattgtcta	ccctgttggg	tccacagaaa	420
ggcagattga	ctttgaatgc	caggtgggtg	gctgagtgtg	agatgccaat	ggcccaggaa	480
acccccacca	gaacagttca	caccctccgg	ttcatgatgg	ttatgtagt	cagaggtttg	540
catatagcaa	tgtatctatc	ataggccatg	gcaacaagaa	gcaccatctc	actaccccca	600
aaaacatgca	agn					613

<210> 2

<211> 578

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 4, 6, 8

<223> N can be any nucleotide

<400> 2

ggntntnacc	acggactcca	agcagtggta	acaacgcaga	gtacgcccgt	tcctgagtga	60
gtagatgaag	gggttcagca	tgggattgat	gacagtgttg	aaaattccaa	cagctttatc	120
cttgtctgaa	agcttggttg	aaccagtcg	catatagtta	aagatacctg	aaccatagaa	180
tatggcaacc	acagtgaggt	gggagccaca	tgtggagaag	gctttcttcc	tgccctctac	240
agagcgaatt	cgcaggactg	cagctgccac	gtggatatag	gagatgacaa	tgagagccat	300
gggggtacct	gccattataa	aaccacagc	aaaaagcagc	agctcattga	gttgggtgct	360
ggagcaggag	agctggaaga	gctgtgggag	gtcacagtag	aagtgattga	tcacattggg	420
gccacagaag	ttgagcgtgg	acatggccac	agtgtgggtc	agtgcgttgg	tgaaagcaca	480
agcccaggac	gcagccacca	acatcctctg	gactgtctga	ctcatgcggg	tgcttgtagg	540
tgagggggccc	ggcagatggg	caggaatcgg	tcataggg			578

<210> 3
 <211> 588
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 4, 5, 13, 16, 27, 576, 578, 588
 <223> N can be any nucleotide

<400> 3
 tggnnntttta tcnccnttgg agctccnaag cagtggtaac aacgcagagt acgcccgttg 60
 cgaagcgtgt agattagggg gttcagtagg ggagtgatga cagtgttagt caccgagatc 120
 agctggtcac gttctctggt gttctctgac ttgggcttga ggtaggcaat ggaggcacag 180
 ctgtagtggg caatgaccac agtgagggtgg gatgcacagg tggcaaaagc cttcttcgg 240
 ccctcaactg aagtaatctt gaggattgta gagataatga gaacataaga aatgaaaacc 300
 agacccatag gtacaacaag caccagcaca ctgataatca aagtcaggat ttcattgaca 360
 gtggtgtcaa tgcaggagag cttcatcaca gggcggatgt cacagaagaa gtggggcacc 420
 ttttctagca cagaagggta acctgaatac agatgtcact tgcgttattg ctacaatcag 480
 cccaatgctg caaggccccc aggacaagtt ggatacgag cctcttggtc ataataacca 540
 tgtatctcaa gggggttgca agatggccac atagcngntc atattccn 588

<210> 4
 <211> 583
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 7, 13, 437, 485, 488, 506, 521, 524, 545, 558
 <223> N can be any nucleotide

<400> 4
 gtngttntta acnccattgg agctccaaag cagtggtaac aacgcagagt acgcccccaa 60
 tgtatttttt tttgagaaac ttgtctttct tagatttttg ttacatctct gtcacaattc 120
 caaaatctat tgtagttcc ttgactcatg atacttccat ttctttcttt ggggtgtgctc 180
 tgcaagcctt ctttttcatg gacttggaac ctacggaggt agccatcctt acagtgtatg 240
 cctgtgaccg ctatatggcc atctgccggc ctttacatta tgaggtcac ataaaccaag 300
 gtgtctgtct gaggatgatg gccatgtcgt ggctcagtg ggtgatctgt ggattcatgc 360
 atgtgatagc aacattctca ttaccattct gtgggcgcaa tagaatacgt caatttttct 420
 gtaatatcc acaactncta agcctcttag accccaaagt aattaccatt gagattggag 480
 tcatnggntt ttggtacaag tcttngata atcctctttg ntgnaattac tctctcctac 540
 atgtncattt ttttttgna tcatgagga ttccttctaa agg 583

<210> 5
 <211> 584
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2, 5, 8-9, 11, 14, 17, 550, 557-559, 561, 576, 582
 <223> N can be any nucleotide

<400> 5
 gnggnttntt nccnccnttg gactccaaag cagtggtaac aacgcagagt acgcccgtgt 60
 gtaaatgaat ggggttcaaca tgggagtcac aacagtgtag gacaatgata gcagcttcgt 120
 gccctcaggt gaattatttg atttaggccg gaagtaggtg aggcttaatg atatataaaa 180
 aagagagaca acaaggaggt gtgaggaaca tgtagaaaag gctttattct tcccttttagc 240
 tgatgggcat ttgaggatgg cagcagcaat gcgagtatag gaacacaaga tcagcaagca 300

ggggatcatg	accaccagaa	tgggtccgac	gatggcgtag	atctcaaaca	gtgctgtgtc	360
tgcacagacc	agcctcagca	caggtgggct	gtcacagaag	aagtgggtca	ccttggttgg	420
gccacagaat	ggaaaactga	agagccatgt	ggtctgcaca	gtagctacag	gaaagcctgg	480
gaaccaggag	gcagcagcca	gtttggcacg	agtcctttgg	ttcatgatga	ctgggtagtg	540
caagggactn	gcagatnnnc	ncattcggtc	atatgncatg	gnag		584

<210> 6
 <211> 572
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2
 <223> N can be any nucleotide

<400> 6	
cnttggagct	ccaaagcagt ggtaacaacg cagagtacgc ccgctccgca gagaatagat 60
gaaaggggtc	aggggtcgggg gcacgactgt gtagaacgca gacaggaaaa catccagaac 120
ggggggagaa	tttgaaattg gcttcacata ggcaatgctg ccagatatca taaagagtgt 180
tacaaccaca	agatgtggaa tgcaggtaga aaatgttttt gatctaccct ccttagaagg 240
aatcctcatg	atgacagaaa aaatgtacat gtaggagaga gtaattacaa caaaggagat 300
tatcacaaag	cttgtaccaa aaaccatgac tccaatctca atggtaatta ctttggggtc 360
taagaggctt	aggagtttgt ggaatattac agaaaaattg acgtattcta ttgcgcccac 420
agaatggtaa	tgagaatgtt gctatcacat gcatgaatcc acagatcacc ccactgagcc 480
acgacatggc	catcctctc agacagacac cttgggtttat gatgacctca taatgtaaag 540
gccggcagga	tggccatata gcggtcatag ga 572

<210> 7
 <211> 549
 <212> DNA
 <213> Homo Sapien

<400> 7	
gcagtggtaa	caacgcagag taccgcccc tatgtacttt ttcttgggaa acttgtctgt 60
gtttgacatg	ggtttctcct cagtgaactt tcccaaaatg ctgctctacc ttatggggct 120
gggcccagctc	atctcctaca aagactgtgt ctgccagctt ttcttcttcc atttcctcgg 180
gagcattgag	tgcttcttgt ttacggtgat ggccatgac cgcttcaactg ccatctgtta 240
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ctgtgggtccc	aatgaagtgg atcacttctt ctgtgacatt ccagcactgt tgcccttggc 420
ctgtgctgac	acatccttag cccagagggg gagcttcacc aacgttggcc tcatatctct 480
ggctgcttcc	tgctaaatct tttatcctac actagaatca caaatatcta tcttaagcat 540
tcgtacaac	

<210> 8
 <211> 548
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 537, 542
 <223> N can be any nucleotide

<400> 8	
ggaacaacgc	agagtcgccc ccgatgtact tgttcttctc caacctgtcc tttgctgaca 60
tttgtgttac	ttccaccacc attccaaaaa tgctgatgaa catccagaca cagaacaaag 120
tcataccta	catagcctgc ctcatgcaga tgtatttttt catactcttt gctggatttg 180
aaaacttctc	cctgtccgtg atggcctatg accggtttgt ggccatctgt caccctctgc 240
actacatggt	cattatgaac cctcacctct gtggactgct gggtctggca tcctggacca 300

tgagtgtctct	gtattccttg	ctacaaatct	taatggtagt	acgactgtcc	ttctgcacag	360
ccttagaaat	cccccacttt	ttctgtgaac	ttaatcaggt	catccaactt	gcttgttctg	420
atagctttct	taatcacatg	gtgatataat	ttacagtttg	cgctgctggg	tggagggtccc	480
tgactgggat	cctttacttc	ttactctaag	ataatttctt	catacatgca	atctcancaa	540
gntcaggg						548

<210> 9
 <211> 583
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 8, 13, 14, 16, 25, 232, 271, 305, 438, 488, 497, 500, 505, 512, 524, 544, 558, 578
 <223> N can be any nucleotide

<400> 9	
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aggctataaa	tgaaggggtt
ttgggttgat	cccttgagat
taaaataaga	aaactacaat
ttggaagatt	tgatctttaa
catantggga	cagctaacat
ttttcaccac	aggcaatctt
ttgagaccac	acagtggnaa
ataccaantt	aaccacnacn
ggtntagtga	agaggttntc
	agaatggcca
	cataccgntc
	aaa
	60
	120
	180
	240
	300
	360
	420
	480
	540
	583

<210> 10
 <211> 569
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 7, 28, 174, 232, 237, 314, 341, 445, 447, 449, 470, 494, 497, 503, 510, 515, 527, 553, 554, 569
 <223> N can be any nucleotide

<400> 10	
gctgctncca	gcagtggtaa
tctgtctctc	ctggatgtct
cgtygtcagg	gaccacattg
ctgtgttggg	gtggccgaga
tatctgctac	ccacttaact
gggaactgcc	tggntctttg
agagcccttc	cgcagagaca
ttggcctctt	ttgtggggga
tcgtggtaat	tctnagnccc
ccaccatcct	agnnaaagtc
	ctccttctn
	60
	120
	180
	240
	300
	360
	420
	480
	540
	569

<210> 11
 <211> 582
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-4, 12, 14, 504, 513, 522
 <223> N can be any nucleotide

<400> 11
 ggnntttttac cncnattgga gctccaaagc agtggttaaca acgcagagta cgccccctat 60
 gtacttggtc ttgagaaact tgtctttctt agatttttgt tacatctctg tcacaattcc 120
 aaaatctatt gttagttcct tgactcatga tacttccatt tctttctttg ggtgtgctct 180
 gcaagccttc tttttcatgg acttggaac tacggaggta gccatcctta cagtgatgctc 240
 ctatgaccgc tatatggcca tctgccggcc tttacattat gaggtcatca taagccaagg 300
 tgtctgtctg aggatgatgg ccatgtcgtg gctcagtggg gtgatctgtg gattcatgca 360
 tgtgatagca acattctcat taccattctg tgggcgcaat agaatacgtc aatttttctg 420
 taatattcca cagctcctaa gcctcttaga ccccaaagta attaccattg agattggagt 480
 catggttttt ggtacaaggc ttgngataat ctncctttgg gnaattactc tctcctacat 540
 gtacattttt tctgcatcat gaggattcct tctaaggagg gg 582

<210> 12
 <211> 579
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 384, 528, 572, 578
 <223> N can be any nucleotide

<400> 12
 ggnnttgacc acggagctcc aagcagtggg aacaacgcag agtacgccct cttgtcctcg 60
 tgccgataca tgatgggggt caacatggga gtcataacag tgtaggacaa tgatagcagc 120
 ttcttgccct caggtgaatt atttgattta ggccggaagt aggtgaggct taatgatata 180
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 aagcagggga tcatgaccac cagaatgggt ccgacgatgg cgtagatctc aaagagtgtc 360
 gtgtctgcac agaccagcct cagnacaggt gggctgtcac agaagaagtg gttcaccttg 420
 ttggtgccac agaatggaaa actgaagagc catgtgggtc gcacagtagc tacaggaaag 480
 cctgggaacc aggaggtagc agccagtttg cacgagtccc tttggttnat gaatgactgg 540
 ggtagtgcaa gggactgcag atggccacat ancggtcnt 579

<210> 13
 <211> 577
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 7-10
 <223> N can be any nucleotide

<400> 13
 gnnnttnnnn ccactggagc tccaaagcag tggttaacaac gcagagtacg cccccaatgt 60
 atttattctt gctcacctct ccttagttga tatctgtttt accaccagta ttgtcccca 120
 gctgctgtgg aacctaaaag gacctgacaa aacaatcaca ttcttggtt gtgtcatcca 180
 gctctacatc tccctggcat tgggctccac tgagtgtgtc ctcttggtg taatggcttt 240
 tgatcgctat gctgcagttt gcaaacctct ccactatacc gccgtaatga accctcagct 300
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 gttgcttcac tgggtcttgc cctcttgcct ttagtgttaa tactgctgcc tatggacata 540
 tagccaaggt ggcataagga tcaagtcagt ccagcct 577

<210> 14
 <211> 577
 <212> DNA
 <213> Homo Sapien

<220>

<221> variation

<222> 3-4, 6, 8, 252, 375, 474, 506, 515, 532, 541, 545-546, 556, 562, 573

<223> N can be any nucleotide

<400> 14

ggnntntnac	tccatggact	ccaagcagtg	gtaacaacgc	agagtacgcc	catacatgat	60
ggggttcagt	aggggagtg	tgacagtgt	ggtcaccgag	atcagctggt	catgttctct	120
ggtgttctct	gacttgggct	tgaggtaggc	aatggaggca	cagctgtagt	ggacaatgac	180
cacagtgagg	tgggatgcac	aggtggcaaa	agccttcttc	cggccctcaa	ctgaagcaat	240
cttgaggatt	gnagagataa	tgagaacata	agaaatgaaa	accagaccca	taggtacaac	300
aagcaccagc	acactgataa	tcaaagtcag	gatttcattg	acagtgggtg	caatgcagga	360
gagcttcatc	acagngcgga	tgacacagaa	gaagtggggc	acctttctag	cacagaaggg	420
taacctgaat	acagatgtca	cttgcggtat	tgctacaatc	agcccaatgc	tgcnngcccc	480
caggacaagt	tggatacgca	gccttntcgt	tctantaacc	atgtatctca	angggcttgc	540
ngatnnccac	atactngcat	anaccattgc	tgngagc			577

<210> 15

<211> 583

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 5, 7, 13, 427, 485, 488, 532, 559, 569, 574, 583

<223> N can be any nucleotide

<400> 15

gncgntntta	acnccattgg	agctccaaag	cagtggtaac	aacgcagagt	acgcccatta	60
cgaaaagtgt	agatgaaggg	gttcaagagg	ggtgtgatga	tgcagctcag	gacggaggca	120
cctttgttga	gcagtttggg	ctgagcctct	gacatacgaa	tgtagagaaa	gatggaactg	180
ccatagatga	tgaccaccac	tgtaagatgc	gaggcgcaag	tggaaaacgc	tttccttcgc	240
tcagcagctg	tagggggcct	gagaacagtg	gcaagaatgc	aggcatagga	aactgaggtc	300
agagccagtg	agcccagtaa	caccaacgta	gagagcatga	aagccaccag	tttcagcagg	360
tgggtgtccc	cacaagaaag	cctgagcaag	ggccaactgt	cacgaaagaa	gtgggtcaata	420
ccattgnggc	cacagaaagg	catggctggc	catgaggaca	gtggggcaaa	ggaccagag	480
gaatncanct	agccaggagg	ccacactagt	ttgtgaacag	acatggccat	tnattaggg	540
ctcatagcgg	agttgtcgnc	agatttgcnt	ggtnacgatt	can		583

<210> 16

<211> 577

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-4, 12, 14, 549

<223> N can be any nucleotide

<400> 16

ggnnttttac	cncnattgga	ctccaaagca	gtggtaacaa	cgcagagtac	gccccctatg	60
tatttattct	tgctcacctc	tccttagttg	atatctgttt	taccaccagt	attgtccccc	120
agctgtctgt	gaacctaaaa	ggacctgaca	aaacaatcac	attcctgggt	tgtgtcatcc	180
agctctacat	ctccctggca	ttgggtccca	ctgagtgtgt	cctcctgggt	gtaatggctt	240
ttgatcgctg	tgctgcagtt	tgcaaacctc	tccactatac	cgccgtaatg	aaccctcagc	300
tgtgccaggg	tctggcaggg	gttgctgggc	tgagtggagt	gggaaacact	cttatccagg	360
gcactgtcac	cctctggctt	ccccgctgtg	gacaccgatt	gctccaacat	ttcttcgtga	420
ggtaccctcc	atgattaagc	ttgcatgtgt	ggacatccat	gataatgagg	ttcagctctt	480

tgttgcttca ctgggtcttgc tctctcttgcc cttagtgtcta atactgtctgc ctatggacat 540
atagccaang tggcataaag gatcaagtca gtccagg 577

<210> 17
<211> 621
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-5, 8, 13, 618
<223> N can be any nucleotide

<400> 17
gnnnntnttt cantccattg ggccctctag atgcatgctc gagcggccgc cagtgtgatg 60
gatatctgca gaattcgccc ttattccgga gggatatacat gaagggttg gtaactagac 120
gtaaactcga agccaagaac agaatttctc ttagaaaaga gaattgaaac taaagagaaa 180
gaactagcaa agaaggaaat attgaatata caagagagag gagacagatg atggaacaag 240
actctgaaag aggtggaagg gattgaatac aatcaaaaagt atggtgactg ctagttccaa 300
gatggtggcg taggggcaag ctggctttgc ttacccccct ggcagaaaac caaaaacaaa 360
tagcaccaag attatcacta gcaatatccc agaactcaca tataaggatg agacagttcc 420
caggggcccag agaagatcag aagcacaagt gggagaagtc agctttggat gctactttgt 480
tctaagggag acaagttggg aggatgattg cagatgtata ttcaatgtta taaaacagcc 540
cataaaacaa agattggaaa atgttgaatt ttgcaaccag gagcaaatac tgggaaaggc 600
gaattccagc cacttgcneg c 621

<210> 18
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-5, 8, 10, 14, 21, 583
<223> N can be any nucleotide

<400> 18
gnnnnttnan tcantgccct ngggccctct agatgcatgc tcgagcggcc gccagtgtga 60
tgatattctg cagaattcgc ccttggtgcg caaggtgttaa atgaaagggt ttgcgcagga 120
gtaaatgaag ggattacgca ggagtaaag aagggtattac gcaggagtaa atgaagggtat 180
tacgcaggag taaatgaagg gattacgcag gagtaaata agggattacg caggagtaaa 240
tgaagggtatt acgcaggagt aaatgaaggg attacgcagg agtaaatagaa gggattacgc 300
aggagtaaat gaagggtatta cgcaggagta aatgaaggga ttacgcagga gtaaatgaag 360
ggattacgca ggagcaaata cataggaagg gcgaattcca gcacactggc ggccgttact 420
agtggatccg agctcgggtac caagcttgat gcatagcttg agtattctaa cgcgtcacct 480
aaatagcttg gcgtaatcat ggtcatagct gtttctctgt tgaaattgtt atccgctcac 540
aattccacac aacatacgag cccggaagca taaagtgtaa agnctggggg gcctaataag 600
tgacttactc catta 615

<210> 19
<211> 696
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-3, 5, 7, 287, 300, 309, 313, 328, 331, 343, 345, 347, 360, 366,
386, 388, 391, 394, 401, 407, 416, 420, 428, 432, 434, 437, 441,
443, 448, 450, 452, 457-458, 463, 476, 484-485, 493, 503, 506, 514,
518, 520, 524, 528, 540, 541, 548, 550, 553-554, 557, 561-562,

566-568, 571-572, 575, 582, 584-585, 587-588, 603, 607, 614,
620,
623, 627, 629, 641, 648, 652, 661-662, 665-666, 668, 672, 675, 678,
684, 695

<223> N can be any nucleotide

<400> 19

gmnantnatt	ccatccattg	tcccttcaga	tgcattgctcg	agcggccgce	agtgtgatgg	60
atatctgcag	aattcgccct	tcttggtttt	tgtgctgata	gatcatggga	ttcagcatgg	120
gggtgaccac	agtgtacatc	actgaggctg	ttgcacttga	gtgtgagttg	cgggtggcag	180
cagaactaag	gtacaccctt	aggattgcac	cataaaataa	ggagacaact	gagaggtgag	240
atgcacaggt	ggaagatgcc	ttgtacttcc	cctgagctga	tgagatngca	tgtatggan	300
gaaattatnt	tanaagtaag	agtaaagnat	nccagtcagg	ggnancnttc	acccatcagn	360
tgcaanttgt	aaaaattata	ttcaancnat	ntgnatttaa	ngaaaancct	tatcangtan	420
acactgcnaa	gntntgnatt	nanccctngn	anttaannnt	tcnacaagaa	aataangtgc	480
gtnnaatct	ttntaagtcc	ctntcnccat	taangtcnan	tccttcctta	tcccttttcn	540
nattttgnan	tcnngantac	nntctnnngc	nntcnatttc	tntnntnnt	gacctactaa	600
ccnattnagt	tacnacaagn	ccnttcnant	ctctataatt	nctgcangt	tntccctctt	660
nncanntncc	cnttntnttc	cctnttcccc	atctnc			696

<210> 20

<211> 615

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 495, 545, 582, 600

<223> N can be any nucleotide

<400> 20

ccattggccc	tctagatgca	tgctcgagcg	gccgccagtg	tgatggatat	ctgcagaatt	60
cgcccttccct	atgtattttc	tcttactggg	ctttcctggg	tctcaaacct	ttcagctctc	120
tctctttatg	ctttttctgg	tgatgtacat	cctcacagtt	agtggtaagt	tggtctatctt	180
gatgttggtg	agcacctccc	atcagttgca	taccccatg	tacttctttc	tgagcaacct	240
ctccttccctg	gagatttggg	ataccacagc	agcagtgccc	aaagcactgg	ccatcctact	300
ggagagaagt	cagaccatat	catttacaag	ctgtcttttg	cagatgtact	ttgttttctc	360
attaggtgct	acagagtact	tcctcctggc	agccatggct	tatgaccgct	gtcttgccat	420
ctgctatcct	ttacactacg	gagccatcat	gagtagcctg	ctctcagcgc	aactggcctt	480
gggcttctgg	gtggntgggt	tcgggggcaa	tgcatgccc	acaggccttc	aatcaagtgg	540
gctgntcctt	ctggtggccc	ccggtgccaa	tcaaccactt	tntttttggg	acaattgcan	600
ccttgggaatt	ggccc					615

<210> 21

<211> 745

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-3, 8, 21, 23, 26, 33, 43, 116, 201, 212, 222, 239, 252, 279, 282,
288, 292-293, 308, 320, 325, 328-330, 333-334, 339-341, 344, 354, 360, 365,
372, 377, 382-383, 388, 390, 394, 397, 402, 415, 418, 422, 424-425, 427, 431,
436, 441, 445, 450, 451, 457, 466, 493, 495, 498, 501, 508-509, 513, 515,
517-518, 520-523, 525, 528-529, 535, 538, 540-542, 544-546, 548-550, 553,
555, 565, 584, 586, 592-593, 607-608, 615, 617, 619, 621, 634, 636-637, 644-
645, 651, 656, 662, 671, 685, 693, 697, 699, 710, 714, 735, 737, 740, 745
<223> N can be any nucleotide

<400> 21

gnncttantt	caatcccacc	nancntgcc	gangcatgct	cgngcggccg	ccagtgtgat	60
ggatatctgc	agaattcgcc	cttcctatgt	atttactctt	actgggcttt	cctggntctc	120
aaactcttca	gctctctctc	tttatgcttt	ttctggtgat	gtacatcctc	acagttagtg	180
gtaatgtggc	tatcttgatg	ntgggtgagca	cntcccatca	gntgcatacc	cccatgttnt	240
tctttctgag	cnacctctcc	ttcctggaga	tttggtatnc	cncaagcngc	anngcccaaa	300
gctttgcnc	tcttattgcn	cagangcnnn	ccnntacann	nacnctcctg	ttntctgctn	360
ccttnccctc	tncttctctc	anntactnct	tctnctntag	tnctcttctt	ctctntcnct	420
cntnncnct	ntaatnttcc	ncctnttctn	ntttctnttt	tcctnctctc	gtttcacccc	480
tacctcttat	ccntnctnct	nacttcann	tengnccntn	nnncnccnnt	aaatntangn	540
nnannntnnn	atntnctctt	ctccttttat	atcgctctct	ctctnctctc	cnnttctctc	600
tcctcannca	tatcnantnt	nttctactct	cgtncnntat	ctannctcct	ntttcngtcc	660
tncttctcct	ntcattttcta	tattncttct	canacantnt	tcgcacgctn	gcancatctc	720
ctcccatctc	ctgtncnctn	tccn				745

<210> 22

<211> 614

<212> DNA

<213> Homo Sapien

<220>

<221> 2-4, 9, 19, 23, 47, 613

<222> (3)...(3)

<223> N can be any nucleotide

<400> 22

gnnnntaant	cattcccnc	tnatgcatg	ctcgagcggc	cgccagngtg	atggatatct	60
gcagaattcg	cccttgtttc	ggaggcagta	gatgaatggg	ttgatggaat	ctgagacagt	120
gctctagaat	ctgtgtttca	tacaggatga	gatataaatg	aaacaaatgc	taaataatga	180
cacaaggtag	cttgccgaga	gaggaatcat	ccacctggaa	gggtaggctg	tttgtgaata	240
atgtagggtg	ggagagaagg	ctttactaag	gagatgggct	taaagaatgt	gaacgatgtg	300
ctcacagagg	ccacagaaga	gaaattatag	ccaggagaaac	aacctgaaag	acaaaggaca	360
cgggtggcatg	agcgcatgta	acacaatgta	ctcaggaaaat	ggctggcatc	ctgagatatg	420
gagtgggaata	cagtacaggg	ctttgtaaac	tcagcttgga	gtcagatcac	agaaagcctt	480
gacaaggaac	tgaaaatggg	ttctgaaggc	cagaagccca	ttcaagattc	ccaaagggaa	540
aaacacaaat	cagcttggtt	tcaggacgta	attcttgga	gttgctagaa	ttacatcaga	600
aaggagggttc	acnt					614

<210> 23

<211> 621

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 6, 8, 12-13, 16, 507, 561, 583, 592

<223> N can be any nucleotide

<400> 23

gnnnntnanc	anncantggg	ccctctagat	gcatgctcga	gcggccgcca	gtgtgatgga	60
tatctgcaga	attcgccctt	cctatgtatt	tctcttact	gggctttcct	ggttctcaaa	120
ctcttcagct	ctctctcttt	atgctttttc	tgggtgatga	catccccaca	gttagtggtg	180
atgtggctat	cttgatgttg	gtgagcacct	cccatcagtt	gcatacccc	atgtacttct	240
ttctgagcaa	cctctccttc	ctggagattt	ggtataccac	agcagcagtg	cccaaagcac	300
tggccatcct	actggggaga	agtcagacca	tatcatttac	aagctgtctt	ttgcagatgt	360
actttgttat	ctcattaggc	tgcacagagt	acttctctct	ggcagccatg	gcttatgacc	420
gctgtcttgc	catctgctat	cctttacact	acggagccat	catgagtagc	ctgctctcag	480
cgcagctggc	cctgggctcc	tgggtgnggg	ggttcgtggc	cattgcaagt	gcccaaacgc	540
cctaatacgt	ggccctgtcc	ntctgggggc	ccccgggcca	ttnaccactt	tnttctggga	600
caattgcacc	cctggaattg	g				621

<210> 24

<211> 612
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 8, 16, 20, 26, 557
 <223> N can be any nucleotide

<400> 24
 tnnttaantc attcctnttgn ccctcnagat gcatgctcga gggcccgcca gtgtgatgga 60
 tatctgcaga attcgccctt tccttggttac tgagggagta gattagggga ttgatggaat 120
 ctgagacagt gctctagaat ctgtgtttca tacaggatga gatataaatg aaacaaatgc 180
 taaataatga cacaaggtac cttgccgaga gaggaatcat ccacctggaa gggtaggctg 240
 tttgtgaata atgtaggggtg ggagagaagg ctttactaag gagatgggct taaagaatgt 300
 gaacgatgtg ctcacagagg ccacagaaga gaaattatag ccaggagaac aacctgaaag 360
 acaaaggaca cgggtggcata agcgcagtga acacaatgta ctcaggaaat ggctggcatc 420
 ctgagatatg gagtgggaata cagtacaggg ctttgtaaac tcagcttgga gtcagatcac 480
 agaaagcctt gacaaggaac tgaaaatggg ttctgaaggc cagaagccat tcaagattcc 540
 caaagggaaa aacacanatc acttgttttc aggacgtatt cttgggcagt tgctagaatt 600
 acatcagaaa gg 612

<210> 25
 <211> 632
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 9, 614
 <223> N can be any nucleotide

<400> 25
 gnnnnttant ccatgcccct ctagatgcat gctcgagcgg ccgccagtgt gatggatattc 60
 tgcagaattc gcccttggtt cgcagcctat aaatgaaggg gttgatggaa tctgagacag 120
 tgctctagaa tctgtgtttc atacaggatg agatataaat gaaacaaatg ctaaataatg 180
 acacaaggta ccttgccgag agagggaatca tccacctgga agggtaggct gtttgtgaat 240
 aatgtaggggt gggagagagg gctttactaa ggagatgggc ttaaagaatg tgaacgatgt 300
 gctcacagag gccacagaag agaaattata gccaggagaa caacctgaaa gacaaaggac 360
 accggtggca taagcacatg taacacaatg tactcaggaa atggctggca tcctgaggta 420
 tggagtggaa tacagtaccg gggctttgta aactcagctt ggagtcagat ccagaaagcc 480
 cttgacaagg aactgaaaat tgggttcttg aaggccagaa gccattcaag gattcccaa 540
 aggggaaaaa cacaaatcaa gcttgttttc agggaccgtt aattctgggg ccaggttgct 600
 tgaattacct tcangaaagg gaggttcaca ct 632

<210> 26
 <211> 628
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 419, 423, 426, 437, 439, 453, 460, 463, 469, 478, 489, 492,
 536, 539, 579, 583, 586, 594, 598, 616, 623, 627
 <223> N can be any nucleotide

<400> 26
 gnncttattc atccccctct agatgcatgc tcgagcggcc gccagtgtga tggatatctg 60
 cagaattcgc cttttctttg ttcctcagag tgtagattag ggggttgatg gggttgatgg 120
 aatctgagac agtgctctag aatctgtgtt tcatacagga tgagatataa atgaaacaaa 180
 tgctaaataa tgacacaagg taccttgccg agagaggaat catccacctg gaagggtagg 240

ctgtttgtga	ataatgtagg	gtgggagaga	aggctttact	aaggagatgg	gcttaaagaa	300
tgtgaacgat	gtgctcacag	aggccacaga	agagaaatta	tagccaggag	aacaacctga	360
aagacaaagg	acacggtggc	ataagcgcac	gtaacacaat	gtactcagga	aatggctgnc	420
atnctnagat	atggagngng	aataccagta	canggccttn	tanactcanc	ttggagtnc	480
gaatcacana	angccttgca	aggaactgaa	aatgggttct	gaaaggccag	aagccnttna	540
agattcccaa	agggaaaaaa	cacaaatcaa	gcttttttna	agnacngtaa	ttcntggngc	600
cagttgctta	gaattnccat	canaaaang				628

<210> 27

<211> 803

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-4, 19, 168, 190, 202, 245-246, 250, 260, 266, 280, 281, 284, 286, 289, 301, 303, 305, 313, 332-333, 348, 355, 357, 360, 365-366, 370, 372, 376, 379, 384, 387-390, 394-396, 400, 406-407, 411-412, 416-418, 421, 423, 430, 439-440, 442-443, 446, 448, 462-463, 468-469, 480, 482-483, 490, 493, 498, 506-508, 518-519, 523, 532, 534, 536, 539 547, 549, 556, 559, 573-575, 580-581, 587, 590, 595-596, 600-601, 603, 612, 614, 618, 623, 629, 633, 640, 643, 646, 655-656, 658, 666, 682, 689, 696, 704, 708-709, 718, 721, 732, 738-739, 743, 746, 751, 759, 764-765, 771, 775, 782-783, 788-789, 791-792, 795, 801

<223> N can be any nucleotide

<400> 27

ggnntaagcc	ttccccctnc	gatgctgctc	gagcgccgc	cagtgtgatg	gatatctgca	60
gaattcgccc	ttcccatgta	tttccctctta	ctgggctttc	ctggttctca	aactcttcag	120
ctctctctct	ttatgctttt	tctggtgatg	tacatctcca	cagttagnng	taatggggct	180
atcttgatgn	tggtgagcac	cncccatcag	ttgcataccc	ccatgtactt	ctttctgagc	240
aaccnntccn	tcctggagan	tttgggnatac	cacacgcaan	nagngnccna	aggcacttgg	300
ncntnctaca	ggnggagaag	gcttgaccat	annattttac	catgcctngc	cttangncan	360
accnntcttn	tnctntntnt	tcnctnnnn	ggtnnntcan	ccgcannctt	nnatcnmntg	420
nancttcacn	gaatatgggn	tnngtntntc	ttgagagcct	cnngatcnna	ttttttccan	480
cnntaaaagn	ggngcttntc	tctctnnnat	ctagcttntt	ggntctcttt	tnntnctna	540
ccgtgntnt	cctatntgnt	gtctcttctc	acnnnctgcn	nttatnttan	atcanntctn	600
ncnttgctct	cntntacnac	atnatcatnc	tcnctcccn	ctntcnctct	ctatnnnta	660
ccatcnctct	cttctcatte	anctctttnt	cattgnttgt	tcanttannc	actctccntc	720
ncatcttcta	tnactannt	ttntnttttt	netctctant	tctnnttcca	ntgtncactc	780
cnntcttnnc	nnttncccta	ncg				803

<210> 28

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 4, 7, 9, 10, 11, 24, 563

<223> N can be any nucleotide

<400> 28

gtntntnann	ncattgcccc	tctngatgca	tgctcgagcg	gccgccagtg	tgatggatat	60
ctgcagaatt	cgcccttcc	atgtacttcc	tcttaccggg	ctttcctggt	tctcaaactc	120
ttcagctctc	tctctttatg	ctttttcttg	tgatgtacat	cctcacgggt	agtggtaaatg	180
tggtatctct	gatgttggtg	agcacctccc	atcagttgca	tacccccatg	tacttctttc	240
tgagcaacct	ctccttccctg	gagatttggt	ataccacagc	agcagtgcc	aaagcactgg	300
ccatcctact	ggggagaagt	cagaccatat	catttacaag	ctgtcttttg	cagatgtact	360
ttgttttctc	attaggctgc	acagagtact	tcctcctggc	agccatggct	tatgaccgct	420
gtcttgccat	ctgctatcct	ttacactacg	gagccatcat	gagtagcctg	ctctcagcgc	480
agctggccct	gggcttctgg	gtgggtgggt	ttcggggcca	ttgcaagtgc	ccacagccct	540

tatcaagtgg cctgtccttc tgnngccccc gggcccatca accacttttt tctggggaca 600
attgcaccct ggaatggccc 620

<210> 29
<211> 620
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 3-5, 7-9, 15, 567, 574, 585, 596, 606, 611-612, 616, 618-619
<223> N can be any nucleotide

<400> 29
gtnnntnnnt ccatnccatt gggccctcta gatgcatgct cgagcggccg ccagtgtgat 60
ggatatctgc agaattcgcc ctttcatggt tccggaaaca gtaaattatg gggttcagtc 120
atggtaacag gaggaggctg agtgtatggg catggatggg ggctgtgaat gtggcgggag 180
ctcatggatg tgctcttctg agtgcttcac gtttctgagt gaaataagaa gcaaggtcat 240
caccgagagg gaggagacag gctcgggtga gtttagtgga tatgaatcca agagagacca 300
ttcaacttag ttgtctatct tttttttctc cagttatagt cacttgcatg aatgtagatg 360
tggagtactt gatcataaga tccattttat ggcagaagac attatttttc tgagccttct 420
gctgtcagtt tctaataaag caggccagcc gggctgtgca cctaaatgct tgtctgggag 480
gagcaggctg agaagtcttg cagtctgcag gacacccgag gaatcgtatt gtgggaaccg 540
tccccgagaa ccacacgagc cgtgctnctc agtnctgact ggaanaatga aattgnaagc 600
caagtngttc nnggancnnt 620

<210> 30
<211> 616
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-4, 7, 9-10, 580
<223> N can be any nucleotide

<400> 30
gmnnttnann ccattgcgcc ctctagatgc atgctcgagc ggccgccagt gtgatggata 60
tctgcagaat tcgcccttcc tatgtatttc tcttcctaac gattggaatg cctgggatta 120
ggcagatgat tttctttttc ccccataccc ctctattatt taggtgattg agtttaaate 180
cctttatcta cacccttcgg aacaagggcg aattccagca cactggcggc cgttactagt 240
ggatccgagc tcggtaccaa gcttgatgca tagcttgagt attctaacgc gtcacctaata 300
tagcttggcg taatcatggt catagctggt tcctgtgtga aattgttatc cgctcacaat 360
tccacacaac atacgagccg gaagcataaa gtgtaaaagc tgggggtgcct aatgagtgag 420
ctaactcaca ttaattgcgt tgcgctcact gcccgcttct cagtcgggaa acctgtcgtg 480
ccagctgcat taatgaatcg gccaacgcgc ggggagaggc ggtttgcgta ttgggcgctc 540
ttccgcttct tcgctcactg actcgctggg cttcggtcgn tcggctgcgg cgagcgggat 600
cagctcactc aaaagg 616

<210> 31
<211> 612
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-9, 13, 507, 554, 585, 598, 600, 609
<223> N can be any nucleotide

<400> 31
gnnnnnnnnnt cangccattg ggccctctag atgcatgctc gagcggccgc cagtgtgatg 60
gatattctgca gaattcgccc ttctatgta tttctcttca ctttctccga catcactcac 120

agccacccca	ccctcagcct	ctccctcctc	ccatgtatatt	tctcttcaat	ctctccttct	180
ttgatatcct	gaactttctg	tagctcttta	ttttctcttc	caatcccttc	atatacacgt	240
ttcgtataca	gggcgaattc	cagcacactg	gcggccgtta	ctagtggatc	cgagctcggt	300
accaagcttg	atgcatagct	tgagtattct	aacgcgtcac	ctaaatagct	tggcgtaatc	360
atggatcatag	ctgtttcctg	tgtgaaattg	ttatccgctc	acaattccac	acaacatacg	420
agccggaagc	ataaagtgtg	aagcctgggg	tgcctaataa	gtgagctaac	tcacattaat	480
tgcgtgcgct	cactggccgc	tttccangtc	gggaaacctg	tcggccagct	gcattaaatg	540
aatcgcccaa	cgcnccggga	gaggcggttt	gcgtattggg	cgctntttcg	ttcttcgntn	600
actgacgnt	gg					612

<210> 32
 <211> 616
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-9, 15, 521, 596
 <223> N can be any nucleotide

<400> 32	
gnnnnnnnnt	tcattncatt
ggatatctgc	agaattcgcc
tagaggtgaa	gagtaaatac
gtggatccga	gctcggtaac
aatagcttgg	cgtaatcatg
attccacaca	acatacgagc
agctaactca	cattaattgc
tgccagctgc	attaatgaat
tcttcgcgtt	cctcgctcac
tcaagctcac	tcaaagggcg
gaacatgtga	gcaaat
gggccctcta	gatgcatgct
cttgttgctt	agagtgtaaa
ataggaaggg	cgaattccag
aagcttgatg	catagcttga
gtcatagctg	tttctgtgtg
cgggaagcata	aagtgtaaaag
gttgcgctca	ctgcccgcctt
cggccaacgc	gcggggagag
tgactcgctg	cgctcggtcg
atccacagaa	tcagggggat
cgagcgggcg	ccagtgtgat
cacactggcg	gacattggct
gacactggcg	gacattggct
gtattctaac	gctgtaccta
gaaattgtta	tccgctcaca
cctgggggtgc	ctaattgagt
tccagtcggg	aaacctgtcg
gcggtttgcg	tattggggcg
ntcggtcgcg	gcgagcggtg
acgcangaaa	

<210> 33
 <211> 621
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2, 4, 6, 8, 19, 27, 31, 464, 526, 554, 578, 598, 600, 615
 <223> N can be any nucleotide

<400> 33	
gntntnanc	atgccccnc
cagaattcgc	ccttggtgcg
aggaaggcg	aattccagca
gcttgatgca	tagcttgagt
catagctgtt	tcctgtgtga
gaagcataaa	gtgtaaagcc
tgcgctcact	gcccgccttc
gccaacgcgc	cggggagagg
gactcgcttg	cgctcggtcc
ggaatacggg	tttncacaga
ggcagcaaaa	gggcnaggaa
ncgagcgggc	gccagtgtga
atgaaggggt	taagggaaga
cgttactagt	ggatccgagc
gtcacctaaa	tagcttggcg
cgctcacaa	tccacacaac
aatgagttag	ctaactcaca
acctgctcgt	ccagctgcat
attggcgct	cttncgcttc
ggcgagcggt	atcaantcac
ataacgcngg	aaagaacatg
tgagccanan	

<210> 34
 <211> 614
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-9, 13-14, 593
 <223> N can be any nucleotide

<400> 34
 gnnnnnnnnnt canncattg ggccctctag atgcatgctc gagcggccgc cagtgtgatg 60
 gatattctgca gaattcgccc ttgttccgaa ggctatagat gaaggggttt taggttttta 120
 ggaacacagg ctaaggggga agagaaaata catgggaagg gcgaattcca gcacactggc 180
 ggccgttact agtggatccg agctcgggtac caagcttgat gcatagcttg agtattctaa 240
 cgcgtcacct aaatagcttg gcgtaatcat ggctcatagct gtttcctgtg tgaaattggt 300
 atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtaaa gcctgggggtg 360
 cctaagtgtg gagctaactc acattaattg cgttgcgctc actgcccgtt ttccagtcgg 420
 gaaacctgtc gtgccagctg cattaatgaa tcggccaacg cgcggggaga ggcggtttgc 480
 gtattgggcg ctcttccgct tcctcgctca ctgactcgct gcgctcggtc gtcggctgcg 540
 gcgagcggtg tcagctcact caaaggcggg aatacgggta tccacagaat cangggataa 600
 cgcaggaaaa gaca 614

<210> 35
 <211> 614
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-4, 7, 9, 23, 599, 611
 <223> N can be any nucleotide

<400> 35
 ggnnttnant cattgccccg ctngatgcat gctcgagcgg ccgccagtgt gatggatattc 60
 tgcagaattc gcccttccga tgtattttct tctacgttaa ggtattttta attgttacta 120
 atgcataagg gcaacacatt ctgtaatgct gacaagatga aagagccaaa agtaattaat 180
 gatgctgtta cctcaciaat atgtatgtgt ggatgtatat atatctattc aatatatgta 240
 actatacata tgtctgtttc taattgaaaa caccaggtaa ttatcatctg tagaaaccct 300
 agtgtctcag ataagttggc tagttttttg tttcacataa aggaacaaaac atttatagat 360
 ttatatgtat attaaaaatg gtaaaaaattg gctgggtgca gtggttcatt cctataatac 420
 cagcactttg ggaagccgag gtgggaggat tacttgaggt aaggagccca gcctgaccaa 480
 caaggtgaaa ccccatccct actaaaaata caagaattag cccgggggat gtggtggcca 540
 cctgtaatcc cagctacttg ggagactgaa gccaggaaaa tcacttgacc caggaagcng 600
 aggttgcagg ngag 614

<210> 36
 <211> 611
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 1, 3-5, 10, 18-20, 22, 26, 605
 <223> N can be any nucleotide

<400> 36
 ngnnnttgan tcaattcnnn gncgangcat gctcgagcgg ccgccagtgt gatggatattc 60
 tgcagaattc gcccttccca tgtattttct tctagccaac ctcccactca ttgatctgtc 120
 tctgtcttca gtcatagccc ccaagatgat tactgacttt ttcagccagc gcaaagtcatt 180
 ctctttcaag ggetgccttg ttcagatatt ttcccttcac ttctttgggt ggagtggat 240
 ggtgatcctc atagccatgg gctttgacag atatatagca atatgcaaac ccctacacta 300
 cactacaatt atgtgtggca acgcatgtgt cggcattatg gctgtcgcatt ggggaattgg 360
 ctttctccat tcggtgagcc agttggcctt tgccgtgcac ttacccttct gtggtcccaa 420
 tgaggtcgat agtttttatt gtgaccttcc tagggtaacc aaacttgcct gtacagatac 480
 ctacaggcta gatattatgg tcattgctaa cagtgggtgt ctcactgtgt ggtcttttgt 540

cttctaataca tctcatacac tatcatccta atgaccatcc agcattgccc tttagataag 600
tcgtncaaag g 611

<210> 37
<211> 616
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-4, 6, 8, 12-14, 17, 19-20, 442, 595, 599
<223> N can be any nucleotide

<400> 37
gnnntnanc cnnnccnncn ctagatgcat gctcgagcgg ccgccagtgt gatggatatac 60
tgcagaattc gcccttccca tgtatttgct tctcagcaac ttgtccttct ctgacctctg 120
cttctcttcc gtgaccattc ccaagttggt acagaacatg cagaaccagg acccatccat 180
cccctatgcg gactgcctga cccaaatgta cttcttctctg ttatttgagg acctggagaa 240
cttctctctt gtggccatgg cctatgaccg ctatgtggcc atctgcttcc ccttgcacta 300
caccgccatc atgagcccca tgctctgtct cgccttgggtg gcgctgtcct ggggtgtgac 360
caccttccat gccatgttac acactttact catggccagg ttgtgttttt gtgcagacaa 420
tgtgatcccc cactttttct gngatatgtc tgctctgtctg aagcaggcct tctctgacac 480
tcgagttaat gaatgggtga tatttatcat gggaggggtc attcttgtca tcccattcct 540
actcattctt gggtcctatg caagaattgt ctctcatcc tcaagggtccc tttntaang 600
gtatctgcaa ggccct 616

<210> 38
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 1, 3-6, 9, 11, 14, 16, 20, 21, 23, 540, 566
<223> N can be any nucleotide

<400> 38
ngnnnnnttna ntcnangccn ngngccctct agatgcatgc tgcagcggcc gccagtgtga 60
tggatatctg cagaattcgc ccttccaatg tatttacttc tcagccagct ctcccttatg 120
gacctgatgt acatctccac caccgtcccc aagatggcgt acaacttcct gtccggccag 180
aaaggcatct ccttctctggg atgtgggtgtg caaagcttct tcttctctgac catggcgtgt 240
tctgaaggct tactcctgac ctccatggcc tacgaccgtt atttggccat ctgccactct 300
ctctattatc ctatccgcat gagtaaaatg atgtgtgtga agatgattgg aggtcttgg 360
aactgggggt ccatcaactc ctgggcacac acagtctttg cccttcataat tccctactgc 420
aggtctaggg ctattgacca tttcttctgc gatgtcccag ccatgttgct tcttgctgta 480
cagatacttg ggtctatgaa tatatggttt ttgtaaggac aaagcctctt tcttcttttn 540
cctttcattg gcatacttc ttctgngggc cgagtcctaa ttgctggcta tataatgcac 600
tcaaaggagg ggagg 615

<210> 39
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 4-8, 12-13, 17-18, 22-23, 26-28, 469, 591, 596
<223> N can be any nucleotide

<400> 39
tagnnnnntt anntcanngc cnntgnnngc tcagatgcat gctcgagcgg ccgccagtgt 60

gatggatata	tgcagaattc	gcccttccaa	tgtattttct	tctcagcagg	agagatattt	120
atcctcactg	ccatgtccta	tgaccgctat	gtagccatct	gctgtccctt	gaactacgag	180
gctgcacaga	gtacttcctc	ctggcagcca	tggcttatga	ccgctgtctt	gccatctgct	240
atcctttaca	ctacggagcc	atcatgagta	gcctgtcttc	agcgcagctg	gccctgggct	300
cctgggtctg	tggtttcgtg	gccattgcag	tggccacagc	cctcatcagt	ggcctgtcct	360
tctgtggccc	ccgtgccatc	aaccactttt	tctgtgacat	tgcaccctgg	attgccctgg	420
cctgcaccaa	cacacaggca	gtagagcttg	tggcctttgt	gattgtctnt	gtggttatcc	480
tgagttcatg	cctcatcacc	cttgtctcct	atgtgtacat	catcagcacc	atccttagga	540
tcccctctgc	agtggccgga	gcaaagcctt	ctcccgtgct	cctcgcctct	naacngngtg	600
ctcatttggg	atggg					615

<210> 40
 <211> 586
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 14, 21, 23, 479, 498, 534, 584
 <223> N can be any nucleotide

<400> 40		
catgctcgag	cggncgccag	
ngngatggat	atctgcagaa	
ttcgcccttc	ctatgtattt	60
gcttctcagc	aggagagata	120
tttatcctca	ctgccatgtc	180
ctatgaccgc	tatgtagcca	240
tctgtgttcc	cctgaactac	300
gaggtgattc	atgtgcccat	360
tagagcttga	gaagcactgc	420
ttggaagccc	cttctgccat	480
caatgaggct	gcacagagta	540
cttcctcctg	gcagccatgg	586
cttatgaccg	ctgccttgcc	
atctgctatc	ctttacacta	
cggagccatc	atgagtagcc	
tgctctcagc	gcagctggcc	
ctgggctcct	gggtctgtgg	
tttcgtggcc	attgcagtgc	
ccacagccct	catcagtggc	
ctgtccttct	gtggcccccg	
tgccatcaac	cacttcttct	
gtgacattgc	accctggatt	
gccctggcct	gcaccaaac	
acaggcagta	gaagcttgng	
gcctttgtga	attgctgntg	
tgggtatccc	gagttcatgc	
ctcatcaccc	ttgncttcta	
tgtgtacatc	atcaggcacc	
attctcagga	tcccttctgc	
aagngg		

<210> 41
 <211> 857
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 5-12, 16-18, 22, 27, 32, 42, 60, 99, 159, 171, 202, 212, 240, 242, 251, 306, 330, 371, 568, 669, 750, 802, 840, 856
 <223> N can be any nucleotide

<400> 41						
atggnnnnnn	nnntttnnnaa	anttttnccc	antttggggc	gnccccccct	tctttaaggn	60
aatgggcccc	ttggggccctt	cccggaaggc	ccggggggcnc	ccggccccca	aggttttgggt	120
tgggaaatgg	ggggaattta	aattcctttg	ggccaaggna	aaaattttcc	ngccccccctt	180
tttttccctt	tttggttttt	anccggggga	angggggggt	tgattaatta	atcgggaagn	240
tnggggggaa	nttttttaaa	aaaaaccttg	ggggaagggtt	ccaacccaac	aaggttgggtt	300
ttccanggga	ccgttgggac	caggcttttn	gaatcaagaa	tcccaaaggg	cattcttttg	360
gattaaggaa	nggtgccggg	accggtgaaa	gggaaaaaac	tgggtggacc	cataccaaaa	420
tgagaaccac	ggtgagatgc	caggagcac	gtggagaaaag	gctttgcttc	cggccactgg	480
cagaggggat	cctgaggatg	gtgcttgatg	atgtacacat	agggagacaa	gggtgatgag	540
gcatgaactc	aggataacca	caacagcnat	cacaaaggcc	acaaagctct	actgcctgtg	600
tgttgggtgc	aggccagggc	aatccagggg	tgcaatgtca	caagaaagaa	agtggttgat	660
ggcacggng	ggccacagaa	ggacaggcca	cttgatgaag	ggcttggtgg	cactgcaatg	720
gccacgaaac	caccagaccc	aggaacccan	ggccaagctt	gcgcctgaag	agcaaggcta	780
ctcatgaatg	gcttccgtag	tngtaaagga	tagcaagatg	gcaaaggcaa	gccggtcatn	840
aagccatggc	ttgccng					857

<210> 42

<211> 620
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 8-10, 43, 611, 613
 <223> N can be any nucleotide

<400> 42
 gnnnttannn cattgcgccc tctagatgca tgctcgagcg gcnccgcccagt gtgatggata 60
 tctgcagaat tcgcccttgt tgcgcaagga gtagatgaac ggattccagg caagggagtg 120
 ctgaggagat agacgggtat aactggggca caagtccatg agtaatcaag gcctgttatt 180
 taaaaaaaaa aaaaaaaaaa cttgaacaat atagaatccc attaccacaga gatagactgg 240
 atggtgaatt aaacttttct gtgaatttct ttccagatat ctctctatgc atatgtatac 300
 acaagcaatt tttggaagaa aagatacttt ataaggataa gcctgaaaac tgcaacgaat 360
 gcaatgtgga gaatgaaggc aagatgtggc gaagaaggcg accacaatct ggtggctgag 420
 agagtgcacac tgtcactaca gctaaaaggga gagctggaga agctgggtgag gacagtaaga 480
 gatgaatctg gtttaagaca cgctgagctc caaatgccat ggctccccta ggttgccctc 540
 tcagatgtaa atcttaagct caaagcaggt ggatgagaaa tcacatttca tagtccctgc 600
 acagacggct ntnttgagct 620

<210> 43
 <211> 608
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 10, 22-24, 27, 592
 <223> N can be any nucleotide

<400> 43
 gnnnntaan tcattgcccc gnnngangca tgctcgagcg gccgcccagt tgatggatat 60
 ctgcagaatt cgcccttccc atgtatttgc ttctcagcaa cttgtccttc tctgacctct 120
 gcttctcttc cgtgaccatt cccaagttgt tacagaacat gcagaaccag gacctggaga 180
 tcccctatgc ggactgcctg acccaaagt acttcttctt gttatttgga gacctggaga 240
 gcttctctct tgtggccatg gcctatgacc gctatgtggc catctgcttc cccctgcact 300
 acaccgccc catgagcccc atgctctgtc tcgccctggg ggcgctgtcc tgggtgctga 360
 ccaccttcca tgccatgtta cacactttac tcatggccag gttgtgtttt tgtgcagaca 420
 atgtgatccc ccacttttct tgtgatatgt ctgctctgct gaagctggcc ttctctgaca 480
 ctcgagttaa tgaatgggtg atatttatca tgggagggct cattcttgca tccattccta 540
 ctcatccttg ggtcctatgc aagaaatgct cctcatcctc aaggcccttc tntaagggta 600
 tctgcaag 608

<210> 44
 <211> 608
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 7, 9, 12, 20, 24, 26, 29, 31-32, 480, 530, 557, 579
 <223> N can be any nucleotide

<400> 44
 gnnnntnant cntgccctgn ccnccngcnc nngcgccgcg gcggatggat atctgcagaa 60
 ttccgcccctg ttactaagag tatagatgaa cggattcagg gcaagggagt gctgaggaga 120
 tagacgggta tacactgggc acaagtccat gagtaatcaa ggcctgttat ttaaaaaaaaa 180
 aaaaaaagct tgaacaatat agaatcccat taccagaga tagactggat ggtgaattaa 240
 actttctggg gaatttcttt ccagatatct ctctatgcat gtgtatacac aagcaatttt 300

tggaagaaaa	gatactttat	aaggataagc	ctgaaaactg	caacgaatgc	aatgtggaga	360
atgaaggcaa	gatgtggcga	agaagggcac	cacaatctgg	tggctgagag	agtgcaactg	420
tcactacagc	taaaaggaga	gctggagaag	ctgggtgagga	cagtaagaga	tgaatctggn	480
ttaagacacg	ctgagtctca	gatgccatgg	cttccctagg	ttgcctcttn	cagatgtaaa	540
tcttaagctc	aaagcangtg	gatgagaaat	acacatttna	tagtcacctg	cacagacggt	600
tttttgat						608

<210> 45

<211> 602

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 14, 16, 19, 21, 23-24, 27, 38, 40, 50, 52, 520, 551

<223> N can be any nucleotide

<400> 45

catgccccgt	ccnncnagnt	ncnngcnccg	cggccgcgnan	ggatatctgn	anaattcgcc	60
cttcctatgt	atttacttct	ccaactttctc	cttcccctct	ctatcattag	aaccatttca	120
tatacacccct	acgaaacaag	ggcgaattcc	agcacactgg	cggccgttac	tagtggatcc	180
gagctcggta	ccaagcttga	tgcataagctt	gagtattcta	acgcgtcacc	taaatagctt	240
ggcgtaatat	tggatcatagc	tgtttccctgt	gtgaaattgt	tatccgctca	caattccaca	300
caacatacga	gccggaagca	taaagtgtaa	agcctggggg	gcctaagtag	tgagctaact	360
cacattaatt	gcggttgcgt	cactgcccgc	tttccagtcg	ggaaacctgt	cgtgccagct	420
gcattaatga	atcgcccaac	gcgcggggag	aggcggtttg	cgtattgggc	gctcttcgcg	480
ttctcgctca	ctgactcgct	gcgctcggtc	gttcggctgn	ggcgagcggt	atcagctcac	540
tcaaaggcgg	naatacggtt	atccacaaga	atcaggggga	taacgcaaga	aaagacatgt	600
ga						602

<210> 46

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 6, 10

<223> N can be any nucleotide

<400> 46

gnnntnattn	attgcattgg	gccctctaga	tgcattgctcg	agcgcccgcc	agtgtgatgg	60
atatctgcag	aattcgccct	tagtgagtag	atgaaagggg	tcagcatggg	ggtcaccaca	120
gtgtacatca	tagccatgac	agtgtccctt	agagtagaac	tattagctga	tgagcataag	180
tagagaccaa	taacggttcc	atagaacagt	gacaccacag	atagggtggga	gccacaagta	240
gagaaggcct	tgcagacacc	cttagaagaa	gggaccttga	ggatggagga	gacaattctt	300
gcataggacc	caaggatgag	taggaatggg	atgacaagaa	tgagccctcc	catgataaac	360
atcacccatt	cattaactcg	agtgtcagag	aaggccagct	tcagcagagc	agacatatca	420
cagaaaaggt	gggggatcac	attgtctgca	caaaaacaca	acctggccat	gagtaaagtg	480
tgtaacatgg	catggaaggt	ggtcagcacc	caggacagcg	ccaccagggc	gagacagagc	540
atggggctca	tgagggcggt	gtagtgcagg	gggaagcaga	tggccacata	gcgggtcatag	600
gccatggcca	caaggaggaa					620

<210> 47

<211> 607

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 572, 578, 594

<223> N can be any nucleotide

<400> 47

cnatgggccc	tctagatgca	tgctcgagcg	gccgccagtg	tgatggatat	ctgcagaatt	60
cgcccttcca	atgtatttgc	ttctcagcaa	cttgctcttc	tctgacctct	gcttctcttc	120
cgtgaccatt	cccaagttgt	tacagaacat	gcagaaccag	gacctatcca	tcccctatgc	180
ggactgcctg	acccaaatgt	acttcttcc	gttatttgga	gacctggaga	gcttctctc	240
tgtggccatg	gcctatgacc	gctatgtggc	catctgcttc	cccctgcact	acaccgccat	300
catgagcccc	atgctctgtc	tcgcccgtgt	ggcgctgtcc	tgggtgctga	ccaccttcca	360
tgccatgtta	cacactttac	tcatggccag	gttggtgttt	tgtgcagaca	atgtgatccc	420
ccactttttc	tgtgatttgt	ctgctctgct	gaagctggcc	ttccctgaca	ctcgagttaa	480
tgaatgggtg	atatttatca	tgggagggtc	cattcttgtc	atccccatcc	tactcaatcc	540
ttgggtctat	gcaagaaatt	gtcttcttca	tntcaangg	ccctttcttc	taanggtatc	600
ttgcaag						607

<210> 48

<211> 613

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 7, 9, 257, 266, 295, 313, 322, 331, 334, 338, 340, 345, 348, 356, 358, 365, 378, 397, 398, 402, 410, 447, 480, 536-537, 557, 563, 576, 580, 584-586, 606, 610-612

<223> N can be any nucleotide

<400> 48

annncntng	gagctccaaa	gcagtggtaa	caacgcagag	tacgccccct	atgtacttac	60
ttttgttaag	tccaacctcc	atcctccttg	gccttttgat	tcaattgatc	actccttcc	120
cctcaaaaca	ccttggtcac	tcaccttttc	tcagtctcct	ttgtggattc	ttcctcattt	180
atttgacctc	ttgctgggtga	accctttcat	atacactctc	cgtaacaaag	agggcgctact	240
tctgtcgtct	tgagcgnact	gatggnaccc	agcttttggt	cccttttagtg	agggntaatt	300
gcgcgcttgg	cgnaatcatg	gncatagctg	nttctgngn	gaaantgnta	tttcgntnac	360
aattncacac	aacatacnag	ccgggagcat	aaaggggnnaa	gncctggggg	gcctaattgag	420
ggagcttact	cacaataatt	gggggtgngcc	cactggcccc	ttttcaggcg	ggaaaacctn	480
gcggggccag	ctggaataaa	tgaatcgggc	cacgcgccgg	ggaggagggc	gggttnngga	540
attgggcgct	ttttccttt	ctnggttaat	ggactnggtg	ggcnnngtcc	gttcgggttg	600
ggggancggn	nnt					613

<210> 49

<211> 593

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 177, 298, 506, 515, 578, 582

<223> N can be any nucleotide

<400> 49

aacgcagagt	accgcccact	acgtaatctg	tacatgaaag	ggtttaaaag	agactgggaa	60
gagaggaatt	ggcaagatca	agcagaggca	actccttcta	gtccttctag	taccgcaagg	120
ggcagataaa	tggaatgggt	aacacctaga	ggaaagtata	cttgccaaaa	gcaaatncat	180
aggggggagt	acattatcgg	gttgaaaaaa	gtattccatg	cagataaaaa	ccaaaagcaa	240
atacatcggg	ggcgtacttc	tgctgtcttt	gagcgtactg	atggtagcca	gcttttgntc	300
cttttagtgag	ggtaatttgc	gcgcttggcg	taatcatggt	catagctggt	ttctgtgtga	360
aattgtttatc	ccgctcacaa	ttcacacaac	atacgagccc	gggagcataa	agtgtaaagc	420
ctgggggtgcc	taatgagtgg	agcttactta	cattaaattg	cgttgcgctc	actggccgct	480
tttccaaagtc	gggaaacctg	tcgtgncagc	ttcantaatg	aatcggccaa	cgccgcgggg	540
agaggcgggt	tgctgtattg	gcgctcttcc	gcttcttngt	tnactgactt	cgg	593

<210> 50
 <211> 624
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 11, 16, 20, 22
 <223> N can be any nucleotide

<400> 50
 gnnntttaac nccgnggctn cnagcagtg g aacaacgcag agtacgcccc cgatgtactt 60
 tctttttcag tctcaagtct tctcttctc caaagatttt gtcttttcta ctacctgagc 120
 taccaaattcc cttgtcatca atttcaataa ctgtattctc ttcattcattt caacttcaaa 180
 cgtgtcatct cagaacaagc ttcatgttac ttccaatttt atccttcttg tttgctgatt 240
 ccaagaattc cagtcccac taggcccgc atgcattgtt cctgccaccc ttttcataac 300
 ctcaattccc ttgtatcatc actttccttt tatatagcac agattccatg attcataaca 360
 ataattatgt ttttttttgc atgtgctctt aatttccttt cttgctccta ttatcttcta 420
 tcatactttt ctggaaacac taattctggt gaaatatact ctttgtggac tttgcactta 480
 tgctcagtc gctgaagatg atggctagac aaatactcac aatcatgctg actggcccaa 540
 tttatagtca tgaccaccga ttacaaaccc cttcatttat tctccgcaac aggggcgtct 600
 tctgcgcttg agcgtccggt gggg 624

<210> 51
 <211> 584
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 584
 <223> N can be any nucleotide

<400> 51
 gcagtggttaa caacgcagag tacgcccgtt acggaggctg taaataaagg ggttgaggaa 60
 gtaaagtact tcacagtact ggagcacaca gcatgtgaat ttcagccaaa ggacaaatgc 120
 ctccaaaaaa agttaattca cagtgcagca gggcgaggca cttgtcttat tcgctggttc 180
 tcacattgac cctgaaagga ctttttttgc ttaatcccat ttccacagat gggaaagggg 240
 ctctgtatgg ttgtcacttt tatccaaagt ctcatagcca gtaagaagct gccctcaaag 300
 tccctaccct gtcttcatt cgactattct gaggttcaga cccagaaacc ccatacctct 360
 gccttatatt ttaatgaaaa gtatgtctcc aggtttatgt ggagaataac caagacctca 420
 gaaacattta gtgaaaatca gagctagaag gaatctgttt ttttgcgagt tcagagaaac 480
 tgacttggat aagacatcaa agttgtcttg tgcagcaaat tctcctccgg cacatagtag 540
 gcactctgat aaattcaaaa aggcttctaa gaagaggcag aagn 584

<210> 52
 <211> 613
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 6, 10-12, 16-17, 20, 553, 594, 607, 613
 <223> N can be any nucleotide

<400> 52
 gtgaanccan nntaanncn attggagctc caagcagtg taacaacgca gagtacgccc 60
 ccgatgtagt ttcttctttc cttccttccc tcttctcttc cttcttttct ttctctctct 120
 ctccctctcc ctctcctct cctctctct ctccttttct ttctctctcc tctctctccc 180
 cccaatccgt tcatgacttc ttcttcttcc tcttcttctt ctttcttctt ttcttctttt 240

tctctaagca	ggatcctggg	ctgttcaaac	cagagagctg	taagtctttt	ctttcccat	300
tactgttaga	tccgttgaat	cggctccaga	aaccaaacaa	gttaaccctt	gcatttacac	360
gtttcgtaac	gggcgtactt	ctgtcgtctt	gagcgtactg	atggtagcca	gcttttggtc	420
ccttttagtga	gggttaattg	cgcgcttgge	gtaatcatgg	tcatagctgt	ttcctgtggg	480
aaattgttat	ccgctcacia	ttccacacia	catacgagcc	gggagcataa	aagtgtaaag	540
cctgggggtgc	ctnatgagtg	agctaactca	cattaattgc	gttgcgctta	ctgnccggtt	600
tcagtcngga	aan					613

<210> 53

<211> 611

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4-5, 7-9, 14-15, 601

<223> N can be any nucleotide

<400> 53

tnanncnmnt	taanncccat	tggagctcca	aagcagtggt	aacaacgcag	agtagcggc	60
cgatgtactt	gcttcttctt	ctttggagtg	gctgaatgct	tcctcctggc	taccatggca	120
tatgaccgct	atgtggccat	ctgcagtcce	ttgcactacc	cagtcacatc	gaaccaaagg	180
actcgtgcca	aactggctgc	tgccctcctg	ttcccaggct	ttcctgtagc	tactgtgcag	240
accacatggc	tcttcagttt	tccattctgt	ggcaccaaca	aggtgaacca	cttcttctgt	300
gacagcccac	ctgtgctgag	gctgggtctg	gcagacacag	cactgtttga	gatctacgcc	360
atcgteggaa	ccattctggg	ggatcatgac	ccctgcttgc	tgatcttgtg	ttcctatact	420
cgcattgctg	ctgccatcct	caagatccca	tcagctaaag	ggaagaataa	agccttttct	480
acatgttctt	cacacctcct	tggtggctct	cttttctata	tatcattaag	cctcacctac	540
ttccggccta	aatcaaataa	ttcacctgag	ggcacgaagc	tgctatcatt	gcctacactg	600
ntatgactcc	a					611

<210> 54

<211> 606

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 4, 483, 509-510, 606

<223> N can be any nucleotide

<400> 54

gtntttccat	ggactcccaa	gcagtggtaa	caacgcagag	tacgccccct	atgtacttac	60
ttcttgctgg	cttatcattt	atagatatca	tttattcttc	atccatttcc	cacagatcga	120
tttcagactt	gttcttttgg	aataattcca	tatccttccc	atcttgcttg	gccagctctt	180
ttacagagcg	ccttttttgg	gggtcagagg	tctttcttct	gttggtgatg	gcctatgacc	240
ttgcattact	tgggtatcat	gagacaatgg	gtgtgtgttt	tgctgctggg	agtgtcctgg	300
gttggaggat	ttctgcactc	agtatttcaa	cttagtggtt	tttatgggct	cccattctgt	360
gacctcaatg	tcattgatca	ttttttctgt	gatatgcacc	ctttattgaa	actggtctgt	420
accgataccc	atgttattgg	cctcttagtg	gtggcaatgg	aggactaggt	tgcaattattg	480
ggnctctgct	cttactcatc	tcttatggnn	catctgcact	ctctaaagaa	ccttagtcag	540
aaagggagggt	gaaaagccct	ctcaacctgc	agttccacat	aactgggggg	tggtttcttc	600
tttgtn						606

<210> 55

<211> 630

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 4-5, 8-9, 12, 16, 19, 295, 298, 321, 472, 481, 573, 617

<223> N can be any nucleotide

<400> 55

ttannccnnt tnaatncnt tggagctcca aagcagtggg aacaacgcag agtacgcccc	60
caatgtactt gcttcttctt ttttggggct gctgagtgtt gcctcctggc caccatggca	120
tatgaccgct acgtggccat ctgtgacccc ttgcactacc cagtcacatcat gggccacata	180
tccgtgtgcc agctggcaag ctgcctcttg gttctcaggg ttttcagtgg ccactgtgca	240
aaccacatgg attttcagtt tccctttttg tggccccaac aggggtgaacc acttntntng	300
tgacagccct cctgttattg nactggctctg tgctgacacc tctgtgtttt gaactggagg	360
ctcttgacag ccactgccta attcattctc tttcctttct tgctgacccct gggatccctat	420
ttcgcattct ctctactatc ttaaggatg ccgtcagctg aggggaaaca tnagcattct	480
ncacctgttc cgcccacctc ttgggtggct ctctcttcta tagcactggc aatccttaac	540
gtattttccg accccaattc aagtgccttt ttntgagaag caaagaaact ggttgctact	600
tttttttcac aagggngnac ttccaatgtt	630

<210> 56

<211> 631

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4, 8-10, 493, 582

<223> N can be any nucleotide

<400> 56

gngntttnnn ccatggagct ccaaagcagt ggtaacaacg cagagtacgc ccccatgtga	60
ctttcttctt ctttggagtg gctgaatgct tctctctggc taccatggca tatgaccgct	120
atgtggccat ctgcagtcct ttgcactacc cagtcacatcat gaaccaaagg actcgtgcca	180
aactggctgc tacctcctgg ttcccaggct tctctgtagc tactgtgcag accacatggc	240
tcttcagttt tccattctgt ggcaccaaca aggtgaacca cttcttctgt gacagcccac	300
ctgtgctgag gctggctctg gcagacacag cactctttga gatctacgcc atcgtcggaa	360
ccattctggt ggtcatgatc ccctgcttgc tgatcttctg ttcctatact cacattgctg	420
ctgccatcct caaggtccca tcagctaaag ggaagaataa agccttttct acatgttcct	480
cacacctcct tgntgtctct cttttctata tatcattaag cctcacctac ttccggccta	540
aatcaataaa ttcacctgag ggcaagaagc tgctatcatt gncctacact gttatgactc	600
catgttgaac cccataattt attcattcag c	631

<210> 57

<211> 637

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 5-6, 76, 82, 92, 106, 122, 125, 142-143, 190, 214, 223, 244, 247, 259, 283, 290, 320, 402, 416, 455, 470, 529, 558, 561, 607, 618, 620, 630

<223> N can be any nucleotide

<400> 57

ttatnccat tggagctcca aagcagtggg aacaaccgca gagtacgccc cccatgtatt	60
ttctttttct tggggnagct gnatgcttcc tncgtggctac catggnatat gaccggctat	120
gnggncatct gcagtcctt gnntctccag tcattatgaa ccaaaggaca cgggccaac	180
tggctgggtg ttcctgggtc ccaagcttct ctgnagctac tngcgaagac cacaatggct	240
cttnagnntt ccattctgng gcaccaacaa ggtgaaccac ttntttctgn gacagccggc	300
tgtgctgaaa gctggctctg tgcaagacac agcactgttt gagatctacg ccacgtcgg	360
aaccattctg gtggtcaatg aacctctgct tgctgatctt gngttcctat actcgnattg	420
gtgctgctat cctcaagaa cccatcaagc taaangggaa gcaataaagn ctttctcta	480
cgtgctcctt aacacctccc ttgggtggct ctcttttcta atataatct ctaagcctca	540
acctacttct tgggcctnaa ntcaataaaa ttcttctgga gaggcaagaa ggtgggtattc	600

atttatncta cactggtnngn gactccatgn tggaact

637

<210> 58
 <211> 621
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 6, 9, 16, 19, 507, 597, 611
 <223> N can be any nucleotide

<400> 58
 gtnatnccnt ttaatnccnt tggagctcca agcagtggtgta acaacgcaga gtacgcccgt 60
 tcctcagaca gtatatgaat ggggttaaaaa tgggccagag cagatgcagg aagatcaaat 120
 aggaggctac tgcagtagag tcaaattctag ggctgatggt ttcttgggat gcatagtaat 180
 aggtagatag agaaagtctt taggaggtag aatggacagg acttcacaat gcattaaatg 240
 tagggagaaa aaaaatgatt cctggggttc tagcttgagc tagtagggat agtggtagaa 300
 tttactgata tggaaaactg gaggaaaaag agtttggaag agaaagatgg caagttaaata 360
 acctgtggga aatataatca cagacactaa ataggcagct gtgtgggtgg caaaggagag 420
 ccattgggcta ggaacataca gtgggattcc ctggcatgtc attggttact gaagtcagag 480
 tgtatgagac agcctaagga gagaatncac acaggagaag aaagaactaa acattcagtg 540
 gctggccaga ggatgagaaa cccaagagat tggactgttt aggagcaaca gtgttngaa 600
 aaggagaaa nggttgaaat t 621

<210> 59
 <211> 631
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 8, 9, 11, 29
 <223> N can be any nucleotide

<400> 59
 ggnnttannc nctggagctc caaagcagng gtaacaacgc agagtacgcc cattgcgtag 60
 cgtgtacata aaggggttgg agctgaagga ggagataaag aagaagacag ccagaacctt 120
 gtcctctgtc ggagatcgca gggatcttgg gccgtagata ggtataagca aaggggtgcat 180
 agtagaaagt cactacagtg aggtgggtgc tgcaggtcga ataggccttc ttctccctt 240
 ctgcagagtg catgtggtag acagcaagga gaatccggcc ataggaacat gcaatacaaa 300
 tgaagggaaa cacaagaaaa atgggtggtgc tcaaaaacac cgtgcactca tagaccagag 360
 tatccgtgca ggctagggtc aacatagctg gaacatcaca gaaaaaatga ttgatggctc 420
 tggacttgca atatgggata cggagtgcac ataccgtgtg agcacaagag ttgatggagc 480
 ctatcatcca agatcctgtt atcatcagtg cacacactct ttttctcata cggatgagat 540
 agtggagagg aaagcaaata gccacataac gatcataggc cattgatgtc aggagcagcg 600
 cttctgcacc tgctaaagtc aggaagaaga t 631

<210> 60
 <211> 620
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 6, 10-11, 15, 18
 <223> N can be any nucleotide

<400> 60
 tgttantccn ntttctncc attggagctc ccaagcagtg gtaacaacgc agagtacgcc 60
 ctccttgttt ctgagagtgt agatgaaggg gttataggag ataaagatca gggcaatatg 120

taggacaagg	acacagacac	tgacaacaaa	gttgattatc	tcattgacag	tggtgtctgt	180
gcaggccagc	ttcagcaggg	gtctcacatc	acagaagaag	tgggagatga	caaagtcac	240
acaaaagggc	aggccaaaca	tagatgttac	ttggacaata	gccatgccc	ggccaatcct	300
cagtgaacca	gatcccagtc	agacacaagc	cctcttacct	atgaataccg	taaggggttg	360
cagaagacca	catagcaatc	atatcccatg	gctatgagaa	gaaagcagtt	gttgatgcca	420
aaagtcacat	agaagagctg	agtgcacacg	ccttgcatga	caataagcta	gtgaggattc	480
aagaggcgag	aaagcatatg	gggagtaatg	gccaccatgt	agcagggtctc	agagatagac	540
agcaatgctt	aggaaaaagt	acatgggccg	tacttctgtc	gtcttgagcg	tactgatggt	600
accagctttt	tgttcccttt					620

<210> 61

<211> 612

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 5-6, 9-10, 20, 25, 37-38

<223> N can be any nucleotide

<400> 61

gtnannccnn	tgtagctccn	aagcngagct	aacaacnnag	agaacaacgc	agagtacgcc	60
cccgatgtac	ttgttcctac	tctttgctgg	atttgaaaa	ttctctctgt	ccgtgatggc	120
ctatgaccgg	tttgtggcca	tctgtcaccc	cctgcactac	atggtcatta	tgaacctca	180
cctctgtgga	ctgctggttc	tagcatcctg	gaccatgagt	gctctgtatt	ccttgctaca	240
aatcttaatg	gtagtacggc	tgctcctctg	cacagcctta	gaaatcccc	actttttctg	300
tgaacttaat	caggtcatcc	aacttgcttg	ttctgatagc	tttcttaatc	acatggtgat	360
atattttaca	gttgcgctgc	tgggtggagg	tccccctact	gggatccttt	actcttactc	420
taagataatt	tcttccatac	atgcaatctc	atcagctcag	gggaagtaca	aggcattttc	480
acctgtgcat	ctcacctctc	agttgtctcc	ttattttatg	gtgcaatcct	aggggtgtac	540
cttagtctgc	tgccacccgc	aactcacact	caagtgaac	agcctcagtg	atgtacactg	600
gggcaccccc	at					612

<210> 62

<211> 628

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-8, 13, 19, 22, 32, 35-41, 49

<223> N can be any nucleotide

<400> 62

gnnnnnnnnat	tnatgcctt	tnttgattcc	cnttnnnnnn	ncaagcagng	gtaacaacgc	60
agagtacgcc	ccctatgtat	ttcttcttaa	gatccaaata	ttaaaataaa	agacagtcac	120
cccaccacta	actaaagtag	tgtttccac	acttctctat	taagaagcat	gtgagatact	180
tgttacaaac	ataacatcct	gggtccaccc	caaagccact	caatcaaata	ctccagggaa	240
gggatctagg	aattcgtagg	tttaacgagt	gccccaaaat	gattattacc	tgttggagaa	300
tctaggcaac	aatgaattaa	ggaaagctct	ctaccatttg	gtactggtac	caggtttgag	360
gatcacaggg	aagagggtaa	gcatacaga	ctagcagagc	tgccagaact	cgggctttca	420
aaagagaggt	gccacctct	cccatgtcca	tgtaagtagc	aaacaaccct	ctcatgtaca	480
ctctgaggaa	caagggggcg	tacttctgtc	gtcttgagcg	tactgatggt	accagcttt	540
tgccccctta	gtgagggtta	attgcgcgct	tggcgtaatc	atgggtcatag	ctgtttctctg	600
tgtgaaattg	ttatccgctc	acaattct				628

<210> 63

<211> 627

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 191, 214, 263, 271, 277, 303, 325, 333, 363, 418, 528, 570, 596, 614

<223> N can be any nucleotide

<400> 63

tgtagctcca	aagcagtgg	aacaacgcag	agtagccct	cttggttacg	taagggaata	60
gatgatggg	ttcagcatg	gggtgactac	agtgtacatg	acagtggcca	cacgggtcca	120
ctctgctgc	gtcgggacgt	ggcctggaag	tagactgcaa	tgactgtcct	atagaaagag	180
gctcaccaca	nccaggtgg	agccacaggt	gggncacaag	tcccggagcc	tcccagaggc	240
ttgagggcag	ctggagcacg	ggnaagcttg	ntatggncct	acaaggaggc	gaggatgagc	300
agnaagggag	tgaccaccac	ttgcngcgcc	ctnggtgaag	atgagcagct	tggatgtggt	360
ggntgtcaga	gcacgagagc	ctttaagaga	ggcttggtgg	gtcacagaag	aagtgggngc	420
actttgtggg	aaagcacaga	aaggacaagc	gagccatgag	caggatatac	aggagggagt	480
tgtccgtggg	acaccagcca	tgccattcca	accagggtcg	cgcacatngc	cggggacatt	540
ctcgtgggat	aagggaaggg	gtgccggatn	ggcacgtatc	agtcataggg	cttggncgcc	600
agaagacagc	tttnaattta	ccccagg				627

<210> 64

<211> 605

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 5-6, 9, 11, 14, 17, 21-22

<223> N can be any nucleotide

<400> 64

gttanncnt	ntanctncaa	nngaggtaac	aacgcagagt	acgcccccca	tgtatttgct	60
tcttgtccaa	cctgtccttt	gtagagatct	gctacaccac	cggtgtggtg	cccttgatgc	120
tttccaacat	ttttggggcc	cagaagccca	ttccattggc	tggatgtggg	gccccaatgt	180
tcctctttct	cacacttggt	ggtgctgact	gttctctctt	ggcgatcggt	gcctatgacc	240
gctatgtggc	catctgccac	cctttgcact	acccctcatc	atgacctgca	gtctgtgcgt	300
gcagatgctg	ggcggcgctg	tgggcctggc	cctcttctct	tccttgacgc	tcaccgcctt	360
aatcttcacc	ttgcccttct	gcggctaccg	ccaggaaatt	aaccacttcc	tctgcgatgt	420
acctccgtcc	tgcgccctgg	ctgcgctgca	tccgtgttca	ccaggctgcc	tctatgtcgt	480
gagcatcctc	gtgctgaccg	tccccttctt	gctcatctgc	gtctcctacg	tggtcatcac	540
ctgtgccatc	ctgagcatcc	gttctgctga	gggcccggc	caggcctttt	caactgtctt	600
tccgg						605

<210> 65

<211> 609

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 10, 14-15, 19, 22, 67, 603

<223> N can be any nucleotide

<400> 65

tgtagctccn	aagnngagnt	ancaacgcag	agtagcccg	cggaatctat	agatgaaagg	60
gtttgngag	tcagaagaag	gaagtacatg	ggagtcataa	cagtgtagga	caatgatggc	120
agcttcttgc	cctcaggtga	attatttgat	ttaggccgga	agtaggtgag	gcttaatgat	180
atatagaaaa	gagagacaac	aaggaggtgt	gaggaacatg	tagaaaaggc	tttattcttc	240
cctttagctg	atgggatctt	gaggatggca	gcagcaatgt	gagtatagga	acacaagatc	300
agcaagcggg	ggatcatgac	caccagaatg	gttccgacga	tggcgtagat	ctcaaagagt	360
gctgtgtctg	cacagaccag	cctcagcaca	ggtgggctgt	cacagaagaa	gtgggtcacc	420
ttgttggtgc	cacagaatgg	aaaactgaag	agccatgtgg	tctgcacagt	agctacagga	480
aagcctggga	accaggagggt	agcagccagt	ttggcacag	tcctttggtt	catgatgact	540

gggtaagtgc aagggactgc agatggccac atagccggtc atatgccatt ggtagcccag 600
gangaagct 609

<210> 66
<211> 617
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 6, 20
<223> N can be any nucleotide

<400> 66
gttatncctt gttgctcccn agcagaggta acaacgcaga gtacgcccct atttctcaga 60
tatangatga aggggttcag aaaaagaatg agcaaagaaa atctgggcca ggcgggcatc 120
aaaagaaata gtcttgtgct caaccagaaa gtctgcaatc attttagggg tagcagaaga 180
ggcaacacat acgtctataa atgacagggt ggcaagaagc aaatacattg ggggcgtact 240
tctgtcgtct tgagcgtact gatggtaccc agcttttgtt cccttttagtg agggttaatt 300
gcgcgcttgg cgtaatcatg gtcatactgt tttcctgtgt gaaattgtta tccgctcaca 360
attccacaca acatacgagc cgggagcata aagtgtaaag cctgggggtgc ctaatgagtg 420
agctaactca cattaattgc gttgcgctca ctgcccgctt tcagtcggga aacctgtcgt 480
gccagctgca ttaatgaatc ggccaacgcg cgggggagag gcggtttgcg tattgggcgc 540
tcttcgcgtt ctgcgtcact gactcgcttg cgctcggtcg ttcggcttgc ggcgagcggt 600
atcaagctca ctcaaat 617

<210> 67
<211> 621
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 10, 17, 28, 277, 286, 370, 373, 422, 513, 527, 536, 545, 548, 550, 558,
563, 566, 572, 574, 579, 583, 603-604, 609, 621
<223> N can be any nucleotide

<400> 67
gggttttacn ctgtgcncnc ccagcagngg taacaacgca gagtacgccc ttgttgcgaa 60
gaaataaatg aatgggttta aaatagacgt gaagatggtg tagaatacag caaggacttt 120
gtcaactgag taactgctga agggccacac atagatgaaa atacacgatc caaagaataa 180
agtgaccaca gtgatgtgag cagtcaatgt ggagtgggccc ttcaccatgc ttacagagga 240
gcgattccta actgtaataa gtattacagt gtagganaca accaanagga gaaaggaact 300
cagagaaaga aagccaccat ctgcaactat tagtaggctg acaacataag tgtctatgca 360
ggctaacttn gtngctagag gaaggtcaca gaaaaaaact atctaccta ttaggaccac 420
anaatggcag attaaccgtg aatgccaaact ggctgggtgt atggatgaag ccacaaacc 480
aggaaatgag gacgagcaca acacatacac agnagctcat gattganatg tagtgnggag 540
gtttncntn gctcatance gtnttngcca tngnaactng gancaccatt ttacttgcag 600
tgngnggagng aacatgaaat n 621

<210> 68
<211> 611
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 5-6, 9-10, 17, 19, 298, 464, 519, 549
<223> N can be any nucleotide

<400> 68
 gttannccnn tttaatncna tggagctcca aagcagtggg aacaacgcag agtacgcccc 60
 cgatgtactt gttcctactc tttgctggat ttgaaaactt cctcctgtcc gtgatggcct 120
 atgaccgggt tgtggccatc tgtaaccccc tgcactacat ggatcattatg aaccctcacc 180
 tctgtggact gctgggttcta gcatcctgga ccatgagtgc tctgtattcc ttgctacaaa 240
 tcttaatggg agtacggctg tcttctgcac agccttagaa atccccact ttttctgnga 300
 acttaatcag gtcataccaac ttgcttggtc tgatagcttt cttaatcaca tggatgata 360
 ttttacagtt gcgctgctgg gtggagggtcc cctcactggg atcctttact ctactctaa 420
 gataatttct tccatacatg caatctcatc agcttagggg aagnacaagg cattttccac 480
 ctgtgcatct caccctttcag ttgctcctta ttttatggng caatctaggg gtgaccttag 540
 ttttctgnc acccgcaact cacacttaag tgcaacaacc tcagtgatgt acactggggt 600
 caccctatgc c 611

<210> 69

<211> 625

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4-6, 11, 15-16, 40, 42, 45, 47, 52, 61, 64-66, 74-75, 77, 80, 586, 618

<223> N can be any nucleotide

<400> 69
 gngnnncgag nttannccctt ggactcccag tagagctacn angantncgc cnagcgcgca 60
 nttnnnccag ggtntntntn gtatcaccaa tgaatagaaa acagacacca ccttgtccct 120
 gcctagcaag tagctggagc tgggtcgcaa gtacacgaaa agggctgtcc caaacagcag 180
 agtcaccacc atcagatgag aggcacacgt gttgcaggct ttccatcgcc cctctgctga 240
 agggatcttc aggaccgcag acactatgta accataggag ataaggagtt ggaggaaacga 300
 tgttcctccg acggtgacca ccacgaggaa attcaccact tgactgagga aggtgtcaga 360
 gcaagacaga gccaggactg gtgggagggt gcagaagaag tggttgatga tgttgggtcc 420
 gcaaaagtga agcctaaata tggagctggc ctggatcagg gagctcagga agccaccaac 480
 atatgcccc accaccatgc gtgtacagag gccctgggtc atgatagtgg ggtanagaag 540
 ggggctggag atggcttgca tatcggtcgt atgcatagc agtcangagg aggcactcaa 600
 gacagaccca tgccgacnaa gaaat 625

<210> 70

<211> 626

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-5, 17-18, 24, 34, 42, 584

<223> N can be any nucleotide

<400> 70
 gnnnnntttta cccctgnngc acanagcagt ggtnacaaac cncgagtacg ccccctatgt 60
 attttttcct attctggaca cgctactcct gaccgtgatg gcctatgacc gggttgtggc 120
 tgtctgccac cctctgcaat atatgatcat catgaacccc cactctgtgt gcctcctggt 180
 ttttctcacc tggctcattg gtgtcatgac atccctcctc catatttctc tgatgatgca 240
 tctaattctc tgtaaagatt ttgaaattcc acatttttct tgcaactga cgtacatcct 300
 ccagctggcc tgctctgata ccttctgaa cagcaggttg atatacttta tgacgggtgt 360
 gctgggcgtt tttccctcc ttgggatcat tttctcttat tcacgaattg cttcatccat 420
 aaggaaagatg tcctcatctg ggggaaaaca aatagcactt tccacctgtg ggtctcacct 480
 ctccgtcgtt tctttatatt atgggacagg cattgggggt cacttcactt ctgcggtgac 540
 tcacccttcc cagaaaatct ccgtggcctc ggtgatgtca ctgnggtcac ccccatgttg 600
 accctttcat ttacaccctt agcaag 626

<210> 71

<211> 633

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-10, 4, 7, 10-11, 33, 35, 39, 50, 57, 60, 61-62, 65, 84-85, 441, 615, 617, 632

<223> N can be any nucleotide

<400> 71

gnnnnnnnnnn	gttnatnccn	nttttaatgc	cantngagnt	aacaacgcan	gagtacnccn	60
nngngtacgc	ccaggggttca	accnntgaat	agaaaacaga	caccaccttg	tccctgccta	120
gcaagtagct	ggagctgggt	cgcaagtaca	cgaaaagggc	tgccccaaac	agcagagtca	180
ccaccatcag	atgcgaggca	cacgtgttgc	aggctttcca	tcgccctctg	ctgaagggat	240
cttcaggacc	gcagacacta	tgtaaccata	ggagataagg	agttggagga	acgatgttcc	300
tccgacgggtg	accaccacga	ggaaattcac	cacttgactg	aggaagggtg	cagagcaaga	360
cagagccagg	actggtgggg	agggttgaag	aagaagtggg	tgatgattgt	tgggtcccgc	420
aaaagtgaaa	gcctaaatat	ngagctggcc	tggatcaggg	gagctcagga	agccacaaca	480
tatgccccaa	ccaccatgcg	tgtacagagg	ccctgggtca	tgatagtggg	ggtngagaag	540
ggggcctgga	gatggctgca	tatcggtcgt	tgccatagca	agtcaggagg	aggcacttca	600
gacagaccca	tgccncnaag	aaaaaaaaact	gnc			633

<210> 72

<211> 614

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-11, 14-17, 19-20, 22, 28, 42-43, 45, 51, 76, 82-83, 85, 101, 106, 110, 112-114, 117, 119, 135, 139, 434, 507, 520, 614

<223> N can be any nucleotide

<400> 72

gnnnnnnnnnn	nttnnnncnn	tnactcngc	agtggttaaca	annantacgc	ncagcgcgca	60
gttaaccctc	actaanggta	anmtnagctg	gaacacatca	ntacgntcan	gnnngcncna	120
tgaccggttt	gtggncatnt	gtcacccctc	gcactacatg	ggtcattatg	aaccctcacc	180
tctgtggact	gctggttcta	gcatectgga	ccatgagtg	tctgtattcc	ttgctacaaa	240
tcttaatggg	agtacggctg	tccttctgca	cagccttaga	aatccccac	tttttctgtg	300
aacttaataca	ggcatccaac	ttgcttggtc	tgatagcttt	cttaatcaca	tggtgatata	360
ttttacagg	tgcgctgctg	ggtggaggtc	ccctgactgg	gaccccttac	tcttactcta	420
aagataattt	cttncatata	tgcaatctca	tcagctcaag	gggaagtcaa	ggcatttttc	480
acctgtgcat	ctaccctca	gttgctnctt	attttatgg	gcaatcctag	gggtgacctt	540
agttctgggtg	gcacccgcaa	ctacactcaa	tgcaaaagct	cagtgatgta	cactgtggca	600
cccatgctga	accn					614

<210> 73

<211> 630

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-6, 8-10, 17, 124, 144, 146, 173, 184, 193, 212, 220, 266, 274, 276, 288, 306, 419, 423, 448, 474, 485, 500, 552, 555, 576, 588, 591, 606

<223> N can be any nucleotide

<400> 73

gtnnnnncnnn	ttgattncca	ttggagctcc	aaagcagtg	taacaacgca	gagtacgccc	60
cctatgtatt	ttttcctatt	ctggacacgc	tactcctgac	cgggatggcc	tatgaccggg	120

ttgnggctgg	ctgccaccct	ctgnantata	tgatcatcat	gaacccccac	ctntgtggcc	180
tcnnggtttt	tgncacctgg	ctcattgggt	tnatgacatn	cctcctccat	atttctctga	240
tgatgcatct	aatcttctgt	aaagantttg	aaantncaca	ttttttntg	cgaactgacg	300
tacatnctcc	agctggcctg	ctctgatacc	ttcctgaaca	gcacgttgat	atactttatg	360
acgggtgtgc	tgggcgtttt	tccctccttg	ggatcatttt	cttcttattc	acgaattgnt	420
ttnatccata	aggaagaatg	tcctcatntg	ggggaaaaaca	aataagcact	tttncacctg	480
tgggnctcaa	cctcttccgn	cgtttcttta	ttttatgggg	acaggcattt	ggggtcccac	540
tttacttttt	gnngngactc	accccttcca	gaaaantttc	cgtgggcntc	ngggatgtac	600
actggnggca	cccccatgtt	gaaccctttt				630

<210> 74

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3,12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 74

ccnatgtayt tntccta

18

<210> 75

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 75

ccnatgtayt tntcctc

18

<210> 76

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 76

ccnatgtayt tntcctg

18

<210> 77
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 77
ccnatgtayt tntctcctt

18

<210> 78
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 78
ccnatgtayt tntctctta

18

<210> 79
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 79
ccnatgtayt tntctcttc

18

<210> 80
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 80

ccnatgtayt tncctcttg

18

<210> 81

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 81

ccnatgtayt tncctcttt

18

<210> 82

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 82

ccnatgtayt tnccttcta

18

<210> 83

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 83

ccnatgtayt tnccttctc

18

<210> 84
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 84
ccnatgtayt tncctctg

18

<210> 85
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 85
ccnatgtayt tncctctt

18

<210> 86
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 86
ccnatgtayt tnccttta

18

<210> 87
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 87

ccnatgtayt tnccttttc

18

<210> 88

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 88

ccnatgtayt tnccttttg

18

<210> 89

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 89

ccnatgtayt tnccttttt

18

<210> 90

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 90

ccnatgtayt tnttccta

18

<210> 91

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 91

ccnatgtayt tnttcctc

18

<210> 92

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 92

ccnatgtayt tnttcctg

18

<210> 93

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 93

ccnatgtayt tnttcctt

18

<210> 94

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 94
ccnatgtayt tnttctta 18

<210> 95
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 95
ccnatgtayt tnttcttc 18

<210> 96
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 96
ccnatgtayt tnttcttg 18

<210> 97
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 97
ccnatgtayt tnttcttt 18

<210> 98
<211> 18

<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 98
ccnatgtayt tntttcta

18

<210> 99
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 99
ccnatgtayt tntttctc

18

<210> 100
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 100
ccnatgtayt tntttctg

18

<210> 101
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 101
ccnatgtayt tntttctt

18

<210> 102
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 102
ccnatgtayt tnttttta

18

<210> 103
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 103
ccnatgtayt tntttttc

18

<210> 104
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 104
ccnatgtayt tntttttg

18

<210> 105
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<210> 106
<211> 31
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 4, 7, 10, 13, 20, 23, 26
<223> N can be any nucleotide

<220>
<221> variation
<222> 1, 2, 8, 12, 15
<223> y = t or c

<220>
<221> variation
<222> 11, 29
<223> r = a or g

<400> 106
yytngtnytn ryncygatan atnatnggrt t

31

<210> 107
<211> 28
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 6, 9, 12, 17, 23
<223> N can be any nucleotide

<220>
<221> variation
<222> 1
<223> y = t or c

<220>
<221> variation
<222> 3, 14, 20, 26
<223> r = a or g

<220>
<221> variation
<222> 8
<223> k = t or g

<220>
<221> variation
<222> 13
<223> w = t or a

<400> 107
ytrtttnckna gnwrtanatr aanggrtt

28

<210> 108
<211> 32
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 9, 12, 15, 21, 24, 27
<223> N can be any nucleotide

<220>
<221> variation
<222> 3, 23
<223> y = t or c

<220>
<221> variation
<222> 6, 18, 30
<223> r = a or g

<220>
<221> variation
<222> 11
<223> k = t or g

<220>
<221> variation
<222> 17
<223> w = t or a

<220>
<221> variation
<222> 26
<223> s = g or c

<400> 108
tcytrttnc knagngwrta naynasnggr tt

32

<210> 109
<211> 32
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 9, 12, 15, 21, 24, 27
<223> N can be any nucleotide

<220>
<221> variation
<222> 6, 14, 18, 30
<223> r = a or g

<220>
 <221> variation
 <222> 11
 <223> k = t or g

<220>
 <221> variation
 <222> 5, 16
 <223> s = g or c

<400> 109
 tcntsrttnc knarnsarta natnatnggr tt

32

<210> 110
 <211> 27
 <212> DNA
 <213> Unknown: Synthetic construct

<220>
 <221> variation
 <222> 4, 7, 10, 16, 22
 <223> N can be any nucleotide

<220>
 <221> variation
 <222> 1, 9, 13, 19, 25
 <223> r = a or g

<220>
 <221> variation
 <222> 6
 <223> k = t or g

<220>
 <221> variation
 <222> 12
 <223> w = t or a

<220>
 <221> variation
 <222> 11
 <223> s = g or c

<400> 110
 rttcncknarn swrtanatra anggrtt

27

<210> 111
 <211> 886
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 7, 11, 16, 18, 21, 209, 231, 258, 259, 266, 267, 269, 282, 287, 289,
 301, 308, 314, 315, 316, 319, 321, 325, 329, 337, 338, 339, 346, 368, 383,
 385, 393, 398, 412, 413, 416, 417, 420, 439, 440, 442, 447, 453, 459, 474,
 479, 484, 488, 499, 508, 513, 521, 526, 536, 541, 549, 559, 574, 579, 587,
 590, 596, 597, 601, 602, 610, 618, 622, 633, 635, 648, 649, 650, 652, 654,

661, 666, 688, 690, 692, 698, 705, 713, 720, 724, 726, 731, 732, 736, 771,
788, 790, 795, 801, 802, 807, 811, 817, 829, 836, 840, 846, 849, 850, 855,
859, 870, 872, 874, 877, 878, 886

<223> n = any nucleotide

<400> 111

```

ggtcccntcg ngatatnctt naccctctga tgctgctcga gcggccggca gggatgatga 60
tatctgcaga attcgccctt ctgttacgca ggaatatata aaggggttac tgaggaataa 120
ataaatgggt tactgaggaa taaataaatg gggtactgag gaacaaatac ataggggtga 180
aagaactgta aaatagaaaa aggaccttnt gctgctcctc aggatggcgg nacttagggg 240
ccatgtacat gacgatgnng ctgccnntna agagtccac tntcancng cctcagcccg 300
ncttttntct cacnnnctnt ntttntctnc cctctttnnc tcttttcttc ctattcccc 360
cccttcnct cctccctttt gentnaccat tgnccctnat ccctttaatt cmtcnmtcn 420
tctccctctt attccttcnn tnttcgnctt cantctctnc ctctttctcc cccncttct 480
ctctctnct ctctctctng tcatcctngt tctttctctt ncctanttec ctctancctt 540
ntcttatnct tctctatnct cctctcatct cacntctctt cctctctctn tactttnctc 600
nctcttccn ctccgtctct cnccttctct tctnaccgcc acccctcnm cmtctctct 660
ntctctctt cactctctcc tctccctnct cmtactntt ctccnctct acntctctatn 720
ctctncttct nctttnactt tgtaacgctc tctctctctt ctctacgcac nttttatctc 780
ttatctcnct catcnccctc nnttctnct nctattnact cttttctctc atactntatn 840
ctcctntcnn cttanactnc ctccctctct tnanccnct actgcn 886

```

<210> 112

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 13, 31, 36-37, 40, 45-48, 50, 53-54, 61, 63, 67-68, 70, 473, 512,
523, 526, 535, 542-543, 545, 549, 558, 566, 571, 582, 589, 593-594, 603, 612-
614, 616, 621, 623-624

<223> n = any nucleotide

<400> 112

```

gctgctcgag cgncgcagcg tcggcagtggt nagggnnatn tgccnnnnntn gcnnttagat 60
nanaggnnntn agtatggggg tgaccacagt ggtacataac tgaggctgtt gcacttgagt 120
gtgagttgcy ggtggcagca gaactaagggt acacccttag gattgcacca taaaataagg 180
agacaactga gaggtgagat gcacaggtgg aaaatgcctt gtacttcccc tgagctgatg 240
agattgcatg tatggaagaa attatcttag agtaagagta aaggatccca gtcaggggac 300
ctccaccag cagcgcaact gtaaaatata tcaccatgtg attaagaaag ctatcagaac 360
aagcaagttg gatgacctga ttaagttcac agaaaaagtg ggggatttct aaggctgtgc 420
agaaggacag ccgtactacc attaatgattt gtagcaagga atacagagca ctnatgggcc 480
aggatgccag aaccagcagt cacagagggg gnggggttca tantgnccct gtagngtcag 540
cnnngacna gatggccnca aaccgntctt nggcccctcac gnccctggna ggnngttttc 600
tantccacca cnnntnttct nannc 625

```

<210> 113

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 6-7, 30, 113, 128, 137, 142, 150, 157, 174, 297, 310, 313, 335, 354,
356, 377, 382, 385, 389, 393, 421, 429, 431, 433, 435, 438, 440, 442-443,
446, 455, 457, 465, 467, 477, 488, 491, 501-502, 504, 508-509, 515, 522, 525-
526, 529-530, 542, 557-559, 561, 564, 565, 568, 577, 579-581, 584, 587-589,
591, 596-603, 607-610, 612-613

<223> n = any nucleotide

<400> 113

```
catgcnnagag caggctcgag cgccggcagn gtgagggata tctgcagaat tcgcccttcc 60
tatgtacttt ttctgagcg tatacacaat cccatcatgt actggggaga agncagacca 120
tatcattnac aagctgnctt tngcagatgn actttgnttt ctcattaggc tgcncagagt 180
acttcctcct ggcagccatg gcttatgacc gctgtcttgc catctgctat cctttacact 240
acggagccat catgagtagc ctgctctcag cgcagctggc cctgggctcc tgggtgngtg 300
gtttcgcgcn cantgcagcg cccacagccc tcagnagcgg tcttgctctt ctgngncccc 360
cgtgccatta accactnctt tngcngcant gcnccctgca ttgtcttgte ctgcccacca 420
nacagcagna nancntgngn cnnttngatc gctgntnccg tctcngntct cactccnttc 480
caccttttnc ntcgcattec nntntccnnc tcgcnctcct gncnntcnn tctcctcttc 540
tnaacgcgtc ctccgannng nctnnatgnt cgtctctnnt ntgngcnng ncagcnnnnn 600
nnnccannnn tnngtgcgcc gctcc 625
```

<210> 114

<211> 651

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 12-13, 20, 23, 188, 375, 399, 402, 416, 443, 460, 472, 474-475, 480, 484, 487-488, 502, 505, 522-523, 529, 532, 537-538, 546, 553, 555, 557, 561, 564-565, 573, 575, 577, 581, 583, 586, 591, 594, 617, 634, 636, 643

<223> n = any nucleotide

<400> 114

```
gnttaagccc tnnccctctn gangcatgct cgagcggccg ccagtgtgat ggatatctgc 60
agaattcgcc ctgttccgc aaacaataga tgaaaggatt aagtgaagga gtgcccaccg 120
catagaagag accaaagaac ttgccctcc cttgggcata cggatttttg ggctggagg 180
agacagcnat gactgagctg tagaagaggg tgaccacagt gagatgggag gaggcagg 240
caaaggcctt tctccatgct gtggcagagt taatcctcag cactgcctgg gcagtggctc 300
cataagaggc aaggatgagg ctgagaggca caaccacgaa gatgacactg gacacagcca 360
actggatttc attgnaggag gcatctccac aggagagtnc gnatcagaga tgggancctc 420
acataaaaaa gtcattctatc tgntgggtggg gacagaatgn ccatgtggag gntnnatgtn 480
cgtntcnac ctcttatttt tntncccc ttcttctcgt cnntccccnt tntcccnct 540
cgccanttec atnncntct ntcnntttt ttntntnacc ntntntcat ntentctctt 600
tattctcttt ctcttgntc tccctctct ctentnttcc canctctccc g 651
```

<210> 115

<211> 850

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 3, 15, 279, 288, 292, 295, 296, 299, 307, 309, 317-319, 322, 326-327, 329, 335, 340, 343, 345-346, 354, 362, 367-368, 377, 380-382, 386, 391, 394, 396, 399-400, 410, 412, 415-416, 418, 433, 436, 442, 444, 451, 455, 466, 468-469, 471, 474, 482, 488, 490, 500, 505, 514, 516, 522, 530, 537, 548, 550, 552, 559, 562-565, 569, 570, 571-573, 576, 581, 592, 597, 603, 605-606, 608, 617, 619, 624, 627, 630, 635-636, 643, 647, 653, 661-663, 667, 673-675, 678, 690, 697-698, 709-711, 720, 724, 727, 731, 736, 746, 760, 768, 771, 783-784, 789, 791, 794, 796, 797, 800-801, 808, 810, 816, 818, 821-822, 832, 836

<223> n = any nucleotide

<400> 115

```
gntctcgggt acaanacttg gccctctaga tgcattgctcg agcggccgcc agtgtgatgg 60
```

```

atatctgcag aattcgccct tccaatgtat ttattcctgt tatttgagaga cctggagagc 120
ttcctccttg tggccatggc ctatgaccgc tatgtggcca tctgcttccc cctgcactac 180
accgccatca tgagcccatg gctctgtctc gccctgggtg cgctgacctg ggtgctgacc 240
accttccatg ccatgttaca cactttactc atggccagnt tgtgcttntg tncnnacna 300
ttgttgntnc cccactnnnc tntgtnntna gtctnctctn ccntnnactg ctctcctctc 360
tnctccnnga gtcctcnggn nncgtngtcg nttncngcnn tcaattgcan tncnnctc 420
atcctttctt tanttntcca tntnttcaact nattnctctt tatccncnnt ntncctctcc 480
anctcctnch tagcttactn tttctntgctc tccngngctc ancttttctn ccataatntc 540
ttctctcnch tntctctcnc tnnnncccn nntctctctg ntctctgctc cntcttnacg 600
tctnnncnct tatttantnt ctncncnctn tctcngctc cancgngta ccngccctac 660
nnctcctcc gannntgntc atggcatctn cacattngc cctactatnn ncgatctatn 720
ttcncgncat ntattncaca tccacntgca ctctactctn ctctctance nccgtacatc 780
gcnntctacng ntgncnntcn nccgctctn cgccncnat nntccactt tntctnggtc 840
cccctctccg 850

```

<210> 116

<211> 620

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 451, 479, 501, 533, 542, 550, 553, 561, 572, 582, 585, 600, 604-605

<223> n = any nucleotide

<400> 116

```

gatgcatgct cgagcgcccg cagtgtgatg gatatctgca gaattcgccc ttccaatgta 60
ctttttcctg aagaacctct ctgttttgga tctgtgctac atctcagtca ctgtgcctaa 120
atccatccgt aactccctga ctgcgagaag ctccatctct tatcttggtc gtgtggctca 180
agcctatttt ttctctgctt ttgcatctgc tgagctggcc ttcttactg tcatgtctta 240
tgaccgctat gttgccattt gccacccct ccaatacaga gccgtgatga catcaggagg 300
gtgctatcag atggcagtea ccacctggct aagctgcttt tctacgcag ccgtccacac 360
tggcaacatg tttcgggagc acgtttgcag atccaatgtg atccaccagt tcttccgtga 420
catccctcag gtgttggtcc tggtttcctg ngaggttttc tttgtagagc tttgaccng 480
ccctgagcct caatgcttgg ntctgggatg ctttattccc atgatgatct ccnattttcc 540
anatcttctn aanggggtc nagaatccct tnaggaccag antcnagcta aaagccttn 600
ccnnctgct tccccccacg 620

```

<210> 117

<211> 628

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 5, 9, 403, 505, 552

<223> n = any nucleotide

<400> 117

```

tggcnctcng atgcatgctc gagcgggcgc cagtgtgatg gatatctgca gaattcgccc 60
ttccaatgta tttgttctct ttatttgagg acctggagag ctctctctct gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgtgac cacttccac gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgcat cccattccta ctnatccttg ggtcctatgc 420
aagaattgtc tctccatcc tcaagggtcc ttcttctaag ggtatctgca aggccttctc 480
tactgtggc tcccacctg tctgnggtgt cactggttct atggaaccgt tattgggtctc 540
tacttatgct cntcagctaa tagttctact cttaaaggaca ctgcatggct atgatgtaca 600

```

ctgtggtgac ccccatgctg aaccctt

628

<210> 118

<211> 783

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 17, 25, 184, 187-188, 199, 202, 206, 212, 214-215, 223, 227-228, 232, 248, 250, 252-253, 255-256, 261-264, 266, 268, 271, 273, 276, 278, 284, 289, 292, 295-296, 298, 300-302, 306, 310, 315-316, 320-322, 325, 329, 333, 337, 340-341, 346, 349, 355, 369, 371, 373-374, 379-380, 383-384, 387-388, 391, 402, 407, 409, 417, 419-420, 436-437, 441-442, 445, 447-448, 450, 456-458, 461, 469, 472, 477-479, 486-487, 490, 493, 503, 510, 512, 517, 530, 540, 542, 544, 552-553, 565, 572, 587, 595, 597-598, 600, 611, 614, 617-618, 622-623, 625, 634-636, 639, 644-645, 646, 652-653, 663, 665, 668, 673-674, 679, 681, 683, 695-696, 699, 706, 710, 712, 716, 725-726, 731-732, 741, 745, 748-750, 763, 771, 774, 776, 772, 774-775, 777-778, 780, 782

<223> n = any nucleotide

<400> 118

```

gatgatgctc gagcggncgc agtgngatgg atatctgcag aattgcgcct tcccatgtat 60
ttgttctctga gcaacctctc ctctctggag atttggtata ccacagcagc agtgcccaaa 120
gcactggcca tcctactggg gagaagacag accatatcat ttacaagctg ccttttgcag 180
atgnacnntg ttttctcant angcentaca gngnncatgt ttncgcnngc cntgacttat 240
gacgcgcntn cnnncntatc nnnntntnct ntncncnac ttntcatna tntgnncntn 300
nnttcnctn tggcnctcn nntcncggnc ttncctntgn ncgtentenc ccttnggcct 360
gcactctcnc ntntctctn ccnncgnnt ntcttctct cntacctnt ttctgtntnn 420
tccctccct ctctgnntgc nntcnncn catctnnntg ntctgatenc tntctnnnt 480
ccatcnngtn ctnttctctc gtntctctcn cncgcncct gcatactgn gcattatatn 540
cncngtctca tnnctatctt ccgtcttct cncctctct ctatgcncga cgtctntntn 600
tactatcgtc ntctcnnat tnnngcctgt tccnngcnc ccgncntcc anntactctc 660
cangntentc ctntctctnt ncctgtctta attcncntnt accgntctn gntctntct 720
cgctnntccc nntctctctc nctcncgnnn centtcagct ntcnanttct antnngnncn 780
cnc

```

<210> 119

<211> 674

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 1, 2, 114, 207, 212, 253, 261, 294, 316-317, 325, 327-329, 333-334, 340, 345, 352, 355, 364, 382, 384, 393-394, 397, 414, 418, 424, 426, 431, 440, 447, 449, 452, 455, 462, 467, 474, 482, 486, 492-493, 496, 500, 503, 509, 516, 519-520, 525, 532, 534, 539, 544, 550, 552, 555, 559, 564, 566, 573, 576, 586, 591, 594, 598, 605, 608, 610-611, 618, 626, 629, 635, 638, 644, 660-661, 666, 669

<223> n = any nucleotide

<400> 119

```

nntagatgca tgctcgagcg gcccgccagt gtgatggata tctgcagaat tcgcccttcc 60
tatgtatttc ttcttgcca acctgtcctt ctggagacc tggtagatct ctgngactgt 120
gccaagtta ctgtttagtt ttgggtctgc gaacaacagc atctctttca cactctgtat 180
gatacaactg tacttcttca ttgctcncat gngcacagaa tgcgtgcttc tggcgcgat 240
ggcctatgac cgntatgtgg ncatctggcg cccactccac tacccaacca taantgacc 300
atgggctcct gctcncnct cgctntnna tanngaacen acagngtagc gncanctccc 360

```



```

tgtncgagaa tctacttcat cntnctgect tannttntgt gggcccaatg tgcntaanca 420
cttngntctg nggacatttn ctccagnant tnaantctct tncgtcnaca aganactgtt 480
cnttancttg annatnttcn ggnacattnt tcctanggnn ttggnacgag cntntctanc 540
accngcactn cncantaant gctncngtgc tantcngtgc cattcntgtg nctncccntt 600
tcatngcntn ncctccencg aaagcnaant aagtngngnt cttnactttc gccccccacn 660
ncatncant ggcc 674

```

<210> 120

<211> 643

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 359, 373, 439, 463, 506, 537, 564, 584, 594, 604, 610, 620, 633-634, 636

<223> n = any nucleotide

<400> 120

```

ggccctctag atgcatgctc gagcgggcgc cagtgtgatg gatatctgca gaattcgccc 60
ttcctatgta ttttttctcg ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc ccctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtng 360
atatattatca tgnaggggct cattcttgct atcccatcc tactcatcct tgggtcctat 420
gcgagaattg tctcctcct cctcaaaggc cccttcttct aanggggtatc tgcaaggcct 480
tctctacttg gtggtcctcc ccctgnetgt ggtgtcactg ttctatttgg aaaccgntat 540
tgggactcta cttatgctca tcangcta atgttttactc ttangggaca ctgncaatgg 600
cctntgaagn taccctgggn gtggaccccc atnntngaac ccc 643

```

<210> 121

<211> 657

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 429, 447, 453, 484, 510, 519, 542, 544, 546, 549, 552, 561, 581, 587, 600-601, 613, 618, 620-621, 623, 632, 643, 655-656

<223> n = any nucleotide

<400> 121

```

ggccctctag atgcatgctc gagcgggcgc cagtgtgatg gatatctgca gaattcgccc 60
ttccaatgta ctttttctcg ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc ccctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggaggggctc attcttgcat cccattccta ctcatccttg ggtcctatgc 420
aagaattgnc tccttccatc tcaaggncctc ttnttctaaa gggatatctgc aaggccttct 480
ctanttggtg ctcccacct gtcttggtgn tggcactgnt tctaattggga accggtattt 540
gnancnctna cnttatgctc natcaactta aatagtttct nactttnaaa gggaccactn 600
ntcattggct tanggatngn ncnttggttt cntggaaatc ccnatcattc ttacnng 657

```

<210> 122

<211> 622

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 9, 536, 543, 587, 609, 616, 619, 621-622

<223> n = any nucleotide

<400> 122

```

atgacctna gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc 60
cttccaatgt atttgttctt gtccaacctg tcttttttgg atattggctt tatctctaca 120
ataattccca atagtctaga tcatattagc tcaggaatta agctgatttc ttatggggag 180
tgtctgacac aactctatct ctctggccta tttgcagatc tggacaacaa ctttctcctg 240
gctgtgttgg cccttgaccg ctatgtggcc atcagccatc ctctccatta tggcctaacc 300
atgaactccc aacgctgtgt cctgttgggt gctgtgtcat gggatgacac tattttacat 360
gccctagtgc atacctcct agtgaccagg ctttcttct gtggtccaaa tattatccct 420
cacttcttct gtgatctggc cccactcctg aagctggcct gctccagtac ttgtgtcaat 480
gatctggtgc tcactcttgt ggcaggaaca ctgctgaatg cgccctttgc tgcattctta 540
tgnccacttt ttacattgca ttggccatcc tgagaattga tccccnagg ggtatgcaaa 600
gggcccttnt ccagctcnc nn                                     622

```

<210> 123

<211> 610

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 4, 445, 568-569, 580, 587, 600, 607, 610

<223> n = any nucleotide

<400> 123

```

gcgncgcagt gtgatggata tctgcagaat tgcgcccttc aatgtatttg tttctgttat 60
ttggagacct ggagagcttc ctccctgttg ccattggccta tgaccgctat gtggccatct 120
gcttccccct gcactacacc gccatcatga gccccatgct ctgtctcgcc ctgggtggcgc 180
tgtcctgggt gctgaccacc ttccatgcca tgttacacac tttactcatg gccaggttgt 240
gtttttgtgc agacaatgtg atccccact ttttctgtga tatgtctgct ctgctgaagc 300
tggcccttctc tgacactcga gttaatgaat gggatgatatt tatcatggga gggctcattc 360
ttgtcatccc attcctactc atccttgggt cctatgcaag aattgtctcc tccatcctca 420
aggtcccttc ttctaagggt atctngcaag gccttctcta ctgcggtc cactgcctg 480
tgggtgtcact gttctatgga accgttattg gtctctactt atgctcatca gccataaagt 540
tttactctaa aaggacactt gcatggnnnt atgatgtacn ctgtgngnac ccccatgctn 600
aaccctttn                                     610

```

<210> 124

<211> 660

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 469, 477, 482, 484, 493, 500, 509, 524, 527, 530, 536, 542, 549,
553-555, 561, 571, 580, 581, 583, 591, 597, 602, 609, 617-619, 624-625, 627,
636, 638, 642, 645-646

<223> n = any nucleotide

<400> 124

```

ccttggggccc tctagatgca tgctcgagcg gccgccagtg tgatggatat ctgcagaatt 60

```

```

cgcccttctt tattcctgag tgaatatatg aggggggttg cactgctgtt aagagtggac 120
aggaaaatgg aaactagacg aacgtgacaa atccacgtgg atccagaaaa ataggaatca 180
ctgaatgcc aagggcaggt cacagaggag gaagaccagc actctgagca ggatgggtcat 240
gtacagcctg gtcaagggca tcttccggga tccacaaagg atcctgacca gcagaaccgg 300
gctggaccgg cagagaacca cacataaaaa aatcagccat gtgactgtga tgaaatctga 360
tgtttcacac caaacagaat caagcaccac tagacaggaa gccacagaac atccattcca 420
ggatgctctg cagcagggac agggcccaga gcaggacaca cgactgctna ccaggtnntt 480
tngngtggct gcnagctctn cttaggatng tccccaagga ttgncnngn cgggtncctt 540
gnttgcttnt cgnncccta nctatgcctt ngctcctgt nancgttgac nattggnctt 600
cncccacgng gcttaannnt ctcnngncgc atttanancg tnatnntact tcccttgctg 660

```

<210> 125

<211> 632

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 488, 505, 507, 586, 618

<223> n = any nucleotide

<400> 125

```

gnccctctag atgcatgctc gagcggccgc cagtgtgatg gatattctgca gaattcgccc 60
ttcctatgta cttcttctg ttatttggag acctggagag cttctctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc ccctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgctgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgta tcccatcct actcatcctt gggctctatg 420
caagaattgt ctccctccatc ctcaagggtc cttcttctaa gggatatctg aaggccttct 480
ctacttgnng ctcccacctg tcttngngng cactgttcta tgggaaccgg tattggtctc 540
tacttaatgc tcatcaagct aatagttcta ctctaaagga cactgncatg gctatgatgt 600
acactgtggt gaccccnat gctgacccat tc 632

```

<210> 126

<211> 642

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 331, 422, 435, 441, 462, 467-468, 471, 479, 500, 502, 513, 521, 537, 543-545, 549, 551, 563, 565-566, 569, 577, 582-583, 586, 594, 596, 611, 614, 620, 624, 631, 639-640

<223> n = any nucleotide

<400> 126

```

tctagatgca tgctcgagcg gccgcagtg gatggatata tgcagaattc gcccttccaa 60
tgtacttggt cctggcagcc atggcttatg accgctgtct tgccatctgc tatcctttac 120
actacggagc catcatgagt agcctgctct cagcgcagct ggccctgggc tcctgggtgt 180
gtgggttctg ggccattgca gtgcccacag ccctcatcag tggcctgtcc ttctgtggcc 240
cccgtgccat caaccacttc ttctgtgaca ttgcacctg gattgccctg gcctgcacca 300
acacacaggc agtagagctt gtggcctttg ngattgctgg tgtggttatc ctgagttcat 360
gcctcatcac ctttgtctcc tatgtggaca tcatcagcac cctccttcag gatccctttt 420
gncagtgccc ggagnaag ncttttccac gtgctcctcg cntctcnncg nggtgctcna 480
tttggtatgg gtccacaagn tnttctttca cgncgggatt ntccattcaa aagatgncct 540
tgnnttttna ncaaaagctt ggncnncgnc ctgaaanact gnngtngact tcangnttta 600
aaactccttt natntcactn ttanggaac naggggcggn ac 642

```

<210> 127
 <211> 688
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 1, 4, 54, 154, 269, 284, 294, 327, 339, 342, 344, 360, 362, 366, 372-373, 379, 382, 390, 393, 395, 397, 402, 408, 410-411, 417, 425, 428, 433, 435, 442, 446-448, 456, 461, 468, 473, 476, 479, 485, 487, 489, 508-509, 514-515, 526, 532-533, 535, 537, 539, 547, 550-551, 553, 555, 559, 572, 578, 582, 587, 595, 597, 602-603, 609-613, 617, 619, 621, 630, 634, 636, 640, 650, 652, 660, 679, 681, 683-684
 <223> n = any nucleotide

<400> 127
 ntgngccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcangaattc 60
 gcccttccca tgtatttatt ccttagcctg ttggattccc agctgcacag ctggattgtg 120
 ttacacaact caccttcttc aagaatgtgg aaancataaa ttttttttct gtgacccatc 180
 tcaacttctc aaccttgccct gttctgacag catcatcaat aacatattat gtattttaga 240
 tatccctata tttgggtttc ttcccattnc agggatcctt ttgncttacc atanaattgt 300
 cctcctccat tccaagaatt ccattgncag acgggacgna tnangecttc tctacctgtg 360
 cntctnacc gnnagtcgnt tntttatctn tgnantnccc tngggcgncn nccctgncct 420
 cagcnttngt cancttctc cncacnntt cgtegtgtt ncccagtnct gtncctnctn 480
 tetentnenc tttctgcctc cctccanng tctnncttct tcagencctt tnnngncnt 540
 gccagencn nangntcnc cctctccct cntgtctnct cnetcctntt cttentntcc 600
 tnnctcatnn nnnegencn ncgtctccn ccctntctn tacgactcnn gncgtctctn 660
 cgcctacgac ctccctgtnc ncnccgg 688

<210> 128
 <211> 619
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 10, 46, 60, 322, 365-366, 464, 472, 475, 482, 493, 498, 498, 504, 517, 535, 543, 547, 556, 564, 584, 590, 600, 602, 610
 <223> n = any nucleotide

<400> 128
 gcgtgctgcn agcggggcgg cagagtgagc ggatatctgc agaatncgcc cttccgatgn 60
 atttctttct aagcaactta tctttcattg acatctgcta ctcttctgct gtggctccca 120
 atatgctcac tgacttcttc tgggagcaga agaccatata atttgtgggc tgtgctgctc 180
 agtttttttt ctttgtcggc atgggtctgt ctgagtgcct cctcctgact gctatggcat 240
 acgaccgata tgcagccatc tccagccccc ttctctaccc cactatcatg acccagggcc 300
 tctgtacacg catggtggtt gnngcatatg ttgggtggctt cctgagctcc ctgatccagg 360
 ccagnnccat atttaggctt cacttttgcg gacccaacat catcaaccac ttcttctgcg 420
 acctccacca gtcttggtc tgtcttgctc tgacaccttc cttnagtcaa gncgncgaat 480
 tntcccgtag tgntcacntg tcgngaggaa acatcgnttt cctccaaccc cttantctcc 540
 cangggntac catagngtct gcngtccct gaagaatcct tttngccaan cgggcgaatn 600
 gnaagccctn ccaccgcc 619

<210> 129
 <211> 697
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 17, 223, 238, 260, 304, 310, 315, 317, 322, 325, 327, 329, 341, 345-347, 350, 351, 356, 361, 369, 373-374, 378, 386, 391, 394, 396, 403, 414, 416, 426, 447-448, 456, 459, 461-462, 469, 473, 475, 477, 482, 488, 493-495, 504, 508, 511, 515, 518, 523, 527, 532-533, 537, 543, 548, 555, 558, 561, 570-571, 578, 580, 587-588, 592, 598-599, 601-602, 606, 608, 613, 619, 622-623, 634-635, 645, 648, 656, 658, 661, 665, 674-675, 682, 685, 687, 694-695

<223> n = any nucleotide

<400> 129

```
gcggcgcagt gtgatgntat ctgacgaatt cgcccttccg atgtatttat ttctaagcaa 60
cttatctttc attgacatct gctactcttc tgctgtggct cccaatatgc tcactgactt 120
cttctgggag cagaagacca tatcatttgt gggctgtgct gctcagtttt ttttctttgt 180
cggcattggg ctgtctgagt gcctcctcct gactgctatg gctacgacc gatatgcngc 240
catctccagc ccccttctcn accccactat catgaccag ggcctctgta cacgcatgga 300
ggtngcgccn tatgntngtt gnetnctng agctccctga nccannmctn ntcacntatt 360
ntaggtcna ccnctcgngc tcccgntcca ncancnaacc ccnttcgttc ctgnanactt 420
ctccancagc ttcttggtt ttctgcnntc gcctcncgnc nnccttatnc ttnangntca 480
cncctganct gcnnttctt ccangecngc ncgcncancc cgnctctnct gnngaancct 540
ttncatnct gctcnatnct nctctcaten ntctctantn ctctccnct cncgctcnnt 600
nncctnctnct ctnaacctnt cnatcctca cctnngatat cctcncgntc tttcngcnc 660
nttcnctgtc cganntcctc anancntcc ctanncg 697
```

<210> 130

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 473, 502, 524, 547, 550, 567, 572, 590, 596, 614-615, 619, 623

<223> n = any nucleotide

<400> 130

```
ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tcgcccttcc 60
tatgtattta ttcttagacc acttgccct cactgacatc tccttttcat ctgtcactgt 120
ccctaagatg ctgatgaaca tgcagactca gcacctagcc gtcttttaca agggatgcat 180
ttcacagaca ttttttttca ttttttttgc tgacttagac agtttcctta tcactcaat 240
ggcatataac aggtatgtgg ccatctgaca tcctctacat tatgccacca tcatgactca 300
gagccagtgt gtcattgctg tggctgggtc ctgggtcctc gcttgtgctg gtgctctttt 360
gcgtaccctc ctctggccc agctttcctt ctgtgctgac cacatcatcc ctactactt 420
ctgtgacctt ggtgccctgc tcaagttggc ctgctcagac acctccctca atnagtttagc 480
aatctttaca ggagcattga cnggcattat gcttccattc ctgngcatcc tgggttctta 540
tgggcanatn tgggggtcac cattctncag anttcttcta ccagggcatn tgcaangcct 600
tggccacttg tggnnccnc tcncg 625
```

<210> 131

<211> 657

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 344, 419, 443, 464, 486, 521, 524, 535, 537-538, 545, 552, 564, 567, 572, 584, 586, 588, 601, 604, 608-609, 611-612, 616, 618, 620, 622, 626, 629-630, 633, 638-639, 643, 645, 655

<223> n = any nucleotide

<400> 131

```

ttggcctcta gatgcatgct cgagcgccgc cagtgtgatg gatatctgca gaattcgccc 60
ttgatacatg attgggttgc ggaaggaata aatcatcggg ttgcggaagg aataaataca 120
tcgggttgcg gaaggaataa atacatcggg ttgcggaagg aataaataca tcgggttgcg 180
gaaggaataa atcatcgggt tgcggaagga ataaatacat cgggttgcg aaggaataaa 240
tacatcgggt tgcgtaagga ataaatcatt ggggttgcgta aggaataaat cattgggttg 300
cgtaaggaat aaatcattgg gttgcgtaag gaataaatca ttgngttgcg taaggaataa 360
atcttttgcg tggtagcgat ctatcatggg gttacgaaag ggaagaaata cattggaang 420
ggcgaattcc agcacactgc cgnccgctac tagtgggac cganctcggg accaagcttt 480
gatgcntagc ttgagtattt taacgcccgc aacctaaaat ngcnttggcc ttacncntg 540
gaccnagctt gnettccttg cgtnaanttt cnttatctct cctntntntc ttctccccc 600
ncanaatnnt nccccngntn ancacncann ttntatanne ctngngctcc cctantc 657

```

<210> 132

<211> 624

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 7, 27, 34, 39, 481, 484, 489, 493, 502, 520, 566, 614, 623-624

<223> n = any nucleotide

<400> 132

```

tggcccncta gatgcatgct cgagcgncgc cagngtgang gatatctgca gaattcgccc 60
ttcctatgta ttatctcctt aatgtcctct cgcttcttga tatttggtac tcttctgtgg 120
tcacacctaa gctcttggtc aacttccttg tctctgacaa gtccatctct tttgagggct 180
gtgtgggtcca gctcgccttc tttgtagtgc atgtgacagc tgagagcttc ctgctggcct 240
ccatggccta tgaccgcttc ctatccatct gtcaaccctt ccattatggt tctatcatga 300
ccagggggac ctgtctccag ctggtagctg tgtcctatgc atttgggtga gccaaactccg 360
ctatccagac tggaaatgtc tttgccctgc ctttctgtgg gcccaaccag ctaacacact 420
actactgtga cataccaccc cttctccacc tggcttgtgc caacacagcc acagcaagag 480
nggnccctcna tgncttttct gntctggcac ccttctggcn gctgcaggca ttctcacctc 540
taccggcttg ggcttggggg ccaatnggga ggatgcgcct caagaacagg gagggagaaa 600
ggaactcccca cttntgcctc ccnn 624

```

<210> 133

<211> 590

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 161, 185, 190, 221, 278, 303, 320, 337, 348, 360, 371, 387-388, 390, 393, 395, 402, 407, 409, 413-414, 423, 437, 449, 455, 459, 461, 464, 466-467, 468, 471, 475, 482, 484, 487, 489, 491, 493-495, 499, 500, 503-504, 510, 515, 519-520, 528, 538, 540, 541, 543, 546, 548, 555-556, 558, 563, 566, 568, 572, 575, 584-586, 588

<223> n = any nucleotide

<400> 133

```

ggagttgata tgaacgggtt aagtgaagga gtgcccactg catagaagag accaaagaac 60
ttgcccctcc cttgggcata cggatttttg ggctggaggt agacagcaat gactgagctg 120
cagaagaggg tgaccacagt gagatgggag gagcaggctc naaaggcctt tctccatgct 180
gtggnagagn taattctcag cactgcctgg gcagtcggct ncataagagg caaggatgag 240
gctgagaggc acaaccacga agatgacact ggacacangc caactgtatc cattgttaga 300
ggnatctcca caggagatgn gaatcagaga tgggacnttc acattaanaa gttatttatn 360
tgctggcggg nacagatgcc caagcggnan gngntatgg tntctggncna ttnttctgct 420

```

```

canacccatt atctcangcc acatgtatnt cagcnttttna ntncnntnt nagtntagtc 480
tngntgntnt ncnnnattnn ccnntctttn tccntcann tatcattntc attccttncn 540
nncananttt atggnnncnc cgnacnncet cngtnactcc cctnnngncg 590

```

<210> 134

<211> 655

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2-3, 5-11, 17485, 506, 512, 514, 518, 525, 543, 578, 590-592, 602, 609, 612, 616, 637, 646

<223> n = any nucleotide

<400> 134

```

gnntnnnnnn ntgttancct cgtccctcta gatgcatgct cgagcggccg ccagtgtgat 60
ggatatctgc agaattcgcc ctccgatgt atttatttct acacagacac agtgacaatc 120
tgatctctct tgcttttccc cacacactgc aacctctgcc tccacattca agtgattctc 180
ctgcctcagc ctcttgagta gctggaatta cagatgtgag ccaccatgcc tggcctgtcc 240
agatgttttt gaaacaaccc ccaccagcac tggagggagt caaggggaaga caagccaggc 300
atctgagctc ctctgtctct gcctttcctt ctactgttcc ccagggtaac ccgtcaccac 360
ccccatcacg aaccccttca tctacacatt acgtaacaag ggcggaattcc agcacactgg 420
cggccgttac tagtggatcc gagctcggtta ccaagcttga tgcatagctt gagtattcta 480
acgntcacc taaatagctt ggcgtnatca tngncccnag cttgntttct gtgtgaaatt 540
tgntatccgc tcacaaatc cacacaacat acgagccnga agcaataagn nntaaagcct 600
gnggtgccna angagngagc taactcacia ttaattncgt tggctnactt gcccc 655

```

<210> 135

<211> 639

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 4, 449, 480, 499, 510, 519, 524-525, 536, 543, 547, 550-551, 557-558, 564, 574, 581, 602, 615, 518, 621, 623, 627, 636, 639

<223> n = any nucleotide

<400> 135

```

ttngnccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcagaattcg 60
cccttcttat gtacttgttt ctaagcaacc tctccttctt ggagatttgg tataccacag 120
cagcagtgcc caaagcaccg gccatcctac tggggagaag tcagaccata tcattttacaa 180
gctgtctttt gcagatgtac tttgttttct cattaggctg cacagagtac ttctctctgg 240
cagccatggc ttatgaccgc tgtcttgcca tctgctatcc ttactactac ggagccatca 300
tgagttagct gctctcagcg cagctggccc tgggctcctg ggtggtgtgg ttctgtggcc 360
attgcagtgc ccacagccct catcagtggc ctgtccttct gtggttcccg tgccatcaaa 420
cacttcttct gtgacattgc accctggant gccctggcct gcaccaacac cacaggcagn 480
aagagcttgt ggccttttng aatcgcttgn tggggctanc cttnngtcat gccctnatca 540
ccntttntcn nctatgnngt acantcatta agnccaatc nctcatggga tccccctttt 600
cnagtggccc ggcgngcnaa ngncctnctc cccgtncen 639

```

<210> 136

<211> 654

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 3, 108, 186, 216, 221, 252, 322, 329, 339, 344, 346, 350, 370, 376, 379, 385, 388, 391, 398-400, 404, 409, 418, 422, 428-429, 433, 437, 455-456, 462, 465, 474-476, 493, 496, 498, 503, 506, 515, 521, 527, 538, 540, 542, 548, 554, 561, 563, 565, 586, 595, 598, 612, 628, 639, 646

<223> n = any nucleotide

<400> 136

```

tgnccctcta gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc 60
cttccgatgt atttgtttct agccaacctg tcattaactg atgcttgntt cacttctgcc 120
tccatcccca aaatgctggc caacattcat acccagagtc agatcatctc gtattctggg 180
tgtctngcac agctatatct cctccttatg tttggnggcc ntgacaactg cctgctggct 240
gtgatgccat angaccgtta tgtggccatt tgccaaccac cccattacag cacatctatg 300
agtccccagc tctgtgcaact antgctgcnc gtgtgctgng tgcnanccan ttgtctgect 360
gctgcacatn ctgttncnc cccnccngg nctctttnnn ccgnaccnc cctacaante 420
cntatcannt tcngetnccc tttcttctcc ccccnnttct tncnccttc ctcnnnccta 480
ctttcttctc tcnccntnct canatnatca gtccnacctc nccttctttt cttcactnan 540
tntctctnct cccnctcacc ngntngtcta gtctgccgtc gccccntcgc tatenctncc 600
cccctctccg cntccctga tegtccctngt ctaccctcnc catctnatcc ctcc 654

```

<210> 137

<211> 658

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 334, 346, 350, 352, 357, 360, 369, 376-379, 389, 394, 397, 400, 401-402, 411, 414, 421, 435, 438, 447-449, 460, 466-467, 474, 476, 480, 486, 500, 504, 510, 512-513, 515, 517, 521, 525, 528, 543, 551, 554-555, 557, 559, 569-570, 572-573, 585, 587, 591, 593-594, 600-601, 606-607, 612, 615, 617, 621, 623, 628-629, 631, 633, 636-637, 640, 655

<223> n = any nucleotide

<400> 137

```

ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tcgcccttcc 60
aatgtatttt tttctaagca acctctcctt cctggagatt tggatatacca cagcagcagt 120
gcccaaagca ctggccatcc cactggggag aagtcagacc atatcattta caagctgtct 180
tttgagatg tactttgttt tctcattagg ctgcacagag tacttctctc tggcagccat 240
ggcttatgac cgctgtcttg ccatctgcta tcctttacac tacggagcca tcatgagtag 300
cctgctctca gcgcagctgg ccttgggctc ctggncgtgn ggcttngtgn cnttgengcn 360
ctcctagcnc tcatgnnnnc cttgccttnt gggncctnng nnatcaccct ntttctctgt 420
nacacttgta cctcncgnc tgcctnnnc tgcttctaann tccctnngtt gtantnccn 480
gccttntctc cccttcgctn gttnatcttn anntnctnct ntctntgncc ctctccttcg 540
ttngaccct ntannncnc tcttctctnn anntccctc tatencccg nttnccctcn 600
ntgtcnnccg antangntac ntntcacnnt ntntcnnctn ctctcctaac tcttnccg 658

```

<210> 138

<211> 670

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 342, 347, 358, 376, 383, 401, 403, 409, 448, 451, 455, 463, 470, 474, 478, 481-482, 484, 487, 489-490, 492, 499, 511, 514, 516, 518, 522, 525, 534,

536, 548, 556, 565, 577, 581, 585, 587, 589, 592, 598, 604, 607-609, 624-626, 628, 636, 639, 645, 651, 655, 660, 661-663, 667-668

<223> n = any nucleotide

<400> 138

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ggccccctag atgcatgctc gagcggggcgc cagcgtgatg gatattctgca gaattcgccc 60
ttcccatgta tttgttttcta agcaacctct ccttcctgga gatttggtat accacagcag 120
cagtgcccaa agcactggcc atcctactgg ggagaagtca gaccatatca tttacaagct 180
gtcttttgca gatgtacttt gttttctcat taggctgcac agagtacttc ctccctggcag 240
ccatggctta tgaccgctgt cttgccatct gctatccttt acactacgga gccatcatga 300
gtagcctgct ctccagcgcag ctggccctgg gctcctgggt gngtggnttc gtggccantg 360
tagtgccac agcccntatc agnggcctgt ccttttggtg ncncccgtn catcaacccc 420
ttctttctgt gacatttgcc cccctgcntt ncccntggcc ctncaccaan cacngcangg 480
nngnttncnn gntcggcnc cccctttgac ntantncntt gntgngcgt tatncntgcg 540
tttaatgncc ttaatnaaac tctcctctt catgttnttc nttntntng gnaccaantc 600
ttcnaanna ccttttttc catnnncng tctacntcnc tctcnccttc ntcgngtttn 660
nnngtcnncc 670
```

<210> 139

<211> 635

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 303, 314, 331, 339, 341, 360, 373, 379, 386, 395, 400, 406, 416, 419, 423, 433, 435, 452, 456, 463, 473, 480-481, 487, 490, 493, 499, 501, 504-505, 509, 511, 514, 517, 519, 522, 523, 534, 535, 543, 544, 554, 560, 563, 565, 567, 579, 584, 593, 596-597, 599, 605-608, 611-612, 619-620, 624, 632, 634

<223> n = any nucleotide

<400> 139

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gatgcatgct cgagcgggccc ccagtgtgat ggatatctgc agaattcgcc cttccgatgt 60
atTTTTTtct aagcaacctc tccttcctgg agatttggtg taccacagca gcagtgccca 120
aagcactggc catcctactg gggagaagtc agaccatatc atttacaagc tgtcttttgc 180
agatgtactt tgTTTTtca ttaggctgca cagagtactt cctcttgcca gccatggctt 240
atgaccgctg cttgccatct gctatccttt acactacgga gccatcatga gtagcctgct 300
ctnagcgcag ctgncctggg ctccctgggtg ngtggttcng ngccattcag cgccacagn 360
cttcacagtg ggnccttgtn ttctgngccc ccgncatcn aaccantttc ttctgngana 420
atngtaccce tgnanttgcc ctggccttgt anccancaca tangctcgta tnggcttctn 480
ntggcncncn tgnttcgcnt ngtnnccgng ntancngnc tnnacgtcct ttcnnacact 540
ttnctctat gttntcaacn tcncngncta ttcgctcang atanccactc ttncanncnt 600
cggannnnta ncttttcnn acctctttc cntnc 635
```

<210> 140

<211> 709

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 357, 369, 379, 382, 414, 430, 441, 458, 462, 468, 474, 481, 486, 494, 505, 507-509, 514, 520, 533, 546, 551, 555-556, 563, 570, 574, 589, 600, 602, 606, 613, 615-616, 622-623, 628, 638, 644, 653, 669, 671, 677, 679, 680-681, 689, 691, 696-698

<223> n = any nucleotide

<400> 140

```
atgacctct agatgcatgc tcgagcggcc gccagtgtga tggatatctg cagaattcgc 60
```

```

ccttcctatg tatttatttc taagcaacct ctccctcctg gagatttggg tataccacag 120
cagcagtgcc caaagcactg ggccatccta ctggggagaa gtcagacat atcatttaca 180
agctgtcttt tgcagatgta ctttgttttc tcattaggct gcacagagta cttcctcctg 240
gcagccatgg cttatgaccg ctgtcttgcc atctgctatc ctttacacta cggagccatc 300
atgagtagcc tgctctcagc gcaagctggc ctgggctcct ggggtgtgtg ttcggnggc 360
cattgcagng cccacagcnc tnatcagtgg gctgtccttt ctgtgggccc ccnggccccat 420
tcaacccacn tttctttttg nggatattgg caaccccntg gnatttgnc cctnggccct 480
ngcacncaaa ccancaccag ggtcngnnna caanctttgn cgggcccctt ttntgaaatt 540
ggcctnggtg ngggnntaat tcnctttggg tttnaatgcc cttccaatna acctttttgn 600
cnttctatg gngnnccct tnnattcnag caccacance ttanggggaa ccnccttttt 660
gtcaagtng nccggtann naaaagccnt ntccnnntg cccccccg 709

```

<210> 141

<211> 671

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 1, 18, 368, 374, 375, 386, 392, 404, 405, 414-415, 420-422, 445-446, 449-450, 452, 460, 467-468, 471, 484, 488, 490, 512, 514, 531, 536-537, 541-542, 549, 562, 568, 572, 574-575, 577, 585, 588, 592-593, 595, 599, 617, 619, 627, 636, 639, 647, 658-659, 661-662, 665-667, 669

<223> n = any nucleotide

<400> 141

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ntggggccctg agatgcangc tcgagcgggc gccagtgtga tggatatctg cagaattcgc 60
ccttcccctg tatttttttc taagcaacct ctccctcctg gagatttggg ataccacagc 120
agcagtggcc aaagcactgg ccctcctact ggggagaagt cagaccatat catttacaag 180
ctgtcttttg cagatgtact ttgttttttc attaggctgc acagagtact tcctcctggc 240
agccatggct tatgatcgct gtcttgccat ctgctatcct ttacactacg gagccatcat 300
gagtagcctg ctctcagcgc agctggccct gggctcctgg gtctgtggtt tcgtggccat 360
tgaagtgncc acanngcctc atcagntggc cntgtccttc tgcnnccccc cgtnncattn 420
nncacttctt tcgtgacatt gccannctnn tnttgccctn gtccttnncc natcatccat 480
ggcngttngn gctgttggcc ctcttgcctc cnngtctgc gccattctc nctgtnncaa 540
nngcctcctt ctactctctg cnttctanct antnncnct ctttctncc tnnantctnt 600
cctcgatctc ctttcangnc tccgtcnac tgetcnctna acgtccttt ctccctnnt 660
ntcnntnct g 671

```

<210> 142

<211> 739

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 5-6, 23, 232, 235, 349, 353, 358, 374, 397, 400, 406, 423-424, 427, 431, 434, 436-437, 440, 445, 448, 450, 452, 467, 471, 477, 488-489, 497-498, 506, 510-512, 518-520, 525, 528, 547, 550, 557-558, 560, 562-563, 566, 569, 590-591, 604-605, 613, 619, 631, 638-639, 642, 646, 649-650, 654, 660-661, 664, 670, 677, 679, 687, 690, 692, 694-695, 701, 714, 716, 722, 725, 731, 739

<223> n = any nucleotide

<400> 142

```

gggcnncttt gggtatgcct tgncccttag atgcatgctc gagcggccgc cagtgtgatg 60
gatattctgca gaattcggcc ttccaatgta cttatttcta gccaacctgt cattaactga 120
tgctgtttc acttctgcct ccattcccaa aatgctggcc aacattcata ccagagtgca 180
gatcatctcg tattctgggt gtcttgacac gctatatttc ctccctatgt tngnggcct 240

```

```

tgacaactgc ctgctggctg tgatggcata tgaccgctat gtggccatct gccaacact 300
ccattacagc acatctatga gtccccagct ctgtgacta atgctgtgng tngctgngt 360
gctaaccaac tggctgccc tgatgcacac actgttntn atccngcgc tttcttggtc 420
ccnntangcc nctnctnctn ttcentntn tntctctacc tctccntcg ngctctnccc 480
cttccccntt ctctctnntg tactnctan nctgttntn cccntctnt ctctcttcc 540
ttctctntcn ctctcgnnnc tnttntctnc tctgtgccct acctgtccn ntcatacctt 600
ttcnaaatcg ctntctatnc cgcctatagt ncaattcnnc tncctnctnn attnctacn 660
nccntectcn ccatcantnc taacctnctn cntnntctct ntctctgtcc tcanctctc 720
gncnatttc nttttccn

```

<210> 143

<211> 611

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 497, 528, 536, 540, 543, 551, 557, 563, 565, 570, 582, 589, 600, 605

<223> n = any nucleotide

<400> 143

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gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc cttgatagat 60
aattgggttc agcatggggg tcaccacagt gtacatcata gccatgacag tgtccttttag 120
agtagaacta ttagctgatg agcataagta gagaccaata acggttccat agaacagtga 180
caccacagac aggtggggagc cacaagtaga gaaggccttg cagataccct tagaagaagg 240
gaccttgagg atggaggaga caattcttgc ataggaccca aggatgagta ggaatgggat 300
gacaagaatg agccctccca tgataaatat caccattca ttaactcgag tgtcagagaa 360
ggccagcttc agcagagcag acatatcaca gaaaaagtgg gggatcacat tgtctgcaca 420
aaaacacaac ctggccatga gtaaagtgtg taacatggca tggaaggtgg tcagcaccca 480
ggacagcgcc accaggncca gacagagcat ggggctcatg atggcgngt agtgcngggn 540
gangcagatg nccacantag tgntnatagn ccattggtcac angggaggna gctttcagg 600
ctttnaataa c

```

<210> 144

<211> 641

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 242, 263, 289, 315, 353, 357, 360, 372, 376, 385, 392, 397, 407, 416, 420, 422, 425, 429, 431, 433, 439, 446-449, 454, 465-466, 471, 479, 485, 492, 499, 501, 512, 516, 524, 528-529, 532, 534, 539, 543, 545, 547, 549, 561, 563, 565, 572-573, 575, 578, 582, 584-586, 596, 602, 604, 613, 615, 617, 622, 627-628, 632, 636-637, 639

<223> n = any nucleotide

<400> 144

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cggtgctcga gggcgccga gtgtgatgga tatctgcaga attcgccctt gttgcgcaaa 60
gagtacatga aggggttaag tgaaggagtg cccactgcat agaagagacc aaagaacttg 120
cccctccctt gggcatacgg atttttgggc tggaggtaga cagcaatgac tgagctgtag 180
aagagggtga ccacagttag atgggaggag cagggtccaa aggcctttct ccatgctgtg 240
gnagagttaa tcctcagcac tgnctgggca gtggctccat aagaggcang gatgaggctg 300
agaggcacia ccacngaaga tgacactgta cacagccaac tgtattttat tgnaggnggn 360
atctccacag gngagnccaa tcagntgatg gntccnccc atttcanaag tcactntatn 420
tntnttgncc ngncacgang gtccntnnng agcngttctt gtccnttctt nactatcgnt 480
tacctccctt cntccctnt ntttctttt cncctnctc ttcnttttnc cntntccnt 540
gtncntntnt atcttcccta ntntctctt tntntctnt tngnnncctt cctctntctt 600
tntntccctc tcnantat cnettggncc cncctntnc c

```

<210> 145
 <211> 837
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 8-9, 12, 330, 350, 364, 367, 387, 390-391, 393-395, 398, 399-400, 403, 406, 409, 411, 413, 416, 428-429, 438, 449, 454, 464-465, 475, 481, 486, 488, 492, 500-501, 504, 506-507, 515, 523, 532, 538, 548, 556, 562, 565, 567, 573-575, 578, 582-583, 589, 592, 598, 599-600, 604, 608, 612, 629, 637-639, 643, 645, 647, 652, 663, 666, 668, 672, 679, 686-687, 689-690, 693, 699, 710, 715, 717, 719, 721-722, 724, 732-734, 748-751, 763-764, 772-773, 780, 783, 791, 811, 818, 828, 834, 836
 <223> n = any nucleotide

<400> 145
 ggttgccnnc gnttaggcat tgggcectct agatgcatgc tcgagcggcc gccagtgtga 60
 tggatatctg cagaattcgc ccttccgatg tatattgtttc taagcaacct ctccttcctg 120
 gagatttggg ataccacagc agcagtgcgc aaagcactgg ccatacctact ggggagaagt 180
 cagaccatat catttacaag ctgtcttttg cagatgtact ttgttttctc attaggctgc 240
 acagagtact tcctcctggc agecatggct tatgaccgct gtcttgccat cctgctatcc 300
 tttaactac ggagccatca tgagtagccn tgctctcagc tgcagctggn cctgggctcc 360
 tggntgnget ggtttctcgc cctattnttn ncnnnacnnn ccntantcng ncncctctct 420
 ctttcttntt tccctttnc tcaactcatnc ctncctctct tttntgtcc tcttnataac 480
 nttgtntntc gnttctcccn ntcentnctt ctctnttget tcnctctctc cntttcgnat 540
 ccctttgntc tctacnctct tncgnantca ctnnnatntc tnnacacng cntcctcnnn 600
 gatnttcncc tcttactgc tactctctnc tatactnnnc ttntntncat antcgtctg 660
 ctncanantc tntcaactnt tcccanncn tcnctgtcnt ctgactctcn cctcntntnt 720
 nntnctcac cnnntacatg gtctctnnn ntccatctcg tcnntctctc cnnatacgn 780
 ttncatactc nctaacttct ctccatcatc ntaacctntc tttctttntc cctngnc 837

<210> 146
 <211> 639
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 16, 340, 379, 394, 401, 425, 428, 433, 435, 437-438, 446, 457, 463-464, 487, 504-505, 508, 510-511, 517-518, 529, 542, 546-547, 549-550, 552-553, 555, 561, 567, 569, 573, 576, 582, 584-586, 590, 594, 597, 599-600, 604, 611, 618, 623, 631, 634, 636
 <223> n = any nucleotide

<400> 146
 gatgatgctc gaggcncgca gtgtgatgga tatctgcaga attcgccctt ccaatgtatt 60
 tatttctagg caccactgac ttcttctct tggccgtcat gtctctggat cgttacctgg 120
 caatctgccg accactccgc tatgagaccc tgatgaatgg ccattgtctgt tcccaactag 180
 tgctggcctc ctggctagct ggattcctct gggctccttg cccactgtc ctcatggcca 240
 gcctgccttt ctgtggcccc aatgggtattg accacttctt tcgtgacagt tggcccttgc 300
 tcaggctttc ttgtggggac acccacctgc tgaaactggn ggctttcatg ctctctacgt 360
 tggtggtact gggcccacng gctctgacct cagntttcta ngcccgcatt cttgccactg 420
 ttctnagngc ccncnanngc ttgccngagc gaagcanaag atnnttttca cattgcgcac 480
 tcggaantta aaggggggtgg cgcnnancn nctgggnngc ttcattctnt ctttttactt 540
 tnccannngn tntnngctca ntccctntnc tentencaat cntnnnggcn ctctngntnn 600
 gtanactgcc ntaattnga ccnctttccc nacnencac 639

<210> 147

<211> 618

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 347, 411, 415, 418, 435, 441-442, 445, 451, 466, 482, 506, 508, 513, 515-516, 526-527, 531-532, 534, 536, 552, 561, 564, 571, 574, 581, 583, 586-588, 591-592, 616

<223> n = any nucleotide

<400> 147

```

catagatgca tgcctcgagcg gccgcagtgat gatggatatac tgcagaattc gcccttccga 60
tgtaagttct ttctaggcac cactgacttc ttctcttgg ccgtcatgtc tctggatcgt 120
tacctggcaa tctgccgacc actccgctat gagaccctga tgaatggcca tgtctgttcc 180
caactagtgc tggcctcctg gctagctgga ttctcttggg tcctttgccc cactgtcctc 240
atggccagcc tgcctttctg tggccccaat ggtattgacc acttctttcg tgacagttgg 300
cccttgctca ggctttcttg tggggacacc cacctgctga aactggnggc ttcatgctc 360
tctacgttgg tgtaactggg ctactggct ctgacctcag nttctange ctgcattctt 420
gtcactgtct caggncctct nnagntgctg ngcgaaggaa agcgctttc acttgccct 480
cnatcttaca ggggtggcat catctnangg ggngnntgca tcctnncta nntnncagg 540
tcccagctat antccaaagt nctnaaaaca ngancctcgg nangannnct nntattctac 600
ccttcttctg aacctncc 618

```

<210> 148

<211> 633

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 11, 33-34, 36, 38, 346, 352, 370, 406, 412, 414, 417, 420, 423-424, 427, 434, 437, 440, 449, 452-453, 474-475, 477, 486-487, 491, 496, 499-500, 505-506, 515, 517-518, 533, 535, 537, 540, 543, 547, 549, 556, 558, 563, 568, 570, 571, 575, 577, 580, 588, 590, 593-594, 598, 607, 612, 623, 626

<223> n = any nucleotide

<400> 148

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cntagatgca ngctcgagcg ggccgagcg tgnngnanat ctgcagaatt cgcccttcca 60
atgtattttt tctcactaac ttgtctttcc tagatctctg ctccaccacc agttctatcc 120
cccagctgct tttcaatcta ggcagcccag gcaagactat cagccacacg ggctgtgcca 180
tccagctctt catgttctct ggccctgggtg gcaagagtgt attctcttgg cagccgtggc 240
ctatgaccgc ttcatgcaa tctgcaagcc ccttcaactat tctgtcatta tgcacctca 300
gctgtgctgg aagttggtgt ctgtggcccg ggggtgttgg actccncagt tntctaggta 360
tgccctcctgn gactatgaag cttgtcacga tgcggaagat gtaagnttgc ancntnccn 420
ttntngnat gcngcntcn tataaaaanc annctggcg ggccacagt cttngnata 480
gcattngtc nccttnatnn catcnnattt gcctngngt ccctcgttcc cantntncan 540
tcnttctng gcttancntt ctncaccngn ncttncntan ctactcentn ttnttctc 600
cttctancct tncatcttcc ttncntcca tcc 633

```

<210> 149

<211> 624

<212> DNA

<213> Homo sapiens

<220>
 <221> variation
 <222> 433, 456, 511, 513, 516, 533, 541, 543-544, 557-558, 561-562, 567, 573, 582, 597, 604, 606, 609, 617, 619
 <223> n = any nucleotide

<400> 149
 gatgcatgct cgagcgggccg ccagtgtgat ggatatctgc agaattcgcc cttgttccta 60
 agactataca tgaatgggtt tagcatcggg ttgaaagaac tgtaaaatag aaaaaggacc 120
 ttctgctgct cctcaggatg gcgggactta ggggccatgt acatgacgat ggcgctgcca 180
 aagaagagtc ccactacgca gaggtgggag gagcagggtg agaaggcctt tctgcggccc 240
 tccccagact ggatcctcag gatggccgcc aggatgtgtg agtaggagac cagcaccagg 300
 cagagtgggtc ccaccaggat gaacatgcag gctgcaaaga tgaccacctg gttgagccag 360
 gtatcagcac aggccagcct gaggacagac aggatttcac aagaagaagt ggttgatttc 420
 acgaggccca canaaagggc agtcttagga tgaggntcac atggaccata gccaggaggg 480
 agccacattg tcccaggaag ngntgnccag agtgatgcag acttttcagg tcntgatgat 540
 ngrnttattc ggagagnntg nnagacnggt cancgttccc gntcgtagga caattancac 600
 ccancngngn ccttcantna tgtc 624

<210> 150
 <211> 611
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 449, 480, 506, 555, 578-579, 601, 608, 610-611
 <223> n = any nucleotide

<400> 150
 gatgcatgct cgagcgggccg ccagtgtgat ggatatctgc agaattcgcc cttccaatgt 60
 atttatttct ctctgacctc tccttcttgg acctctgctt taccacaagt tgtgtccccc 120
 agatgctggt caacctctgg ggcccaaaga agaccatcag cttcctggga tgctctgtcc 180
 agctcttcat ctctctgtcc ctggggacca ctgagtgcag cctcctgaca gtgatggcct 240
 ttgaccgata cgtggctgtc tgccagcccc tccactatgc caccatcatc cccccccgcc 300
 tgtgctggca gctggcatct gtggcctggg ttatgagtct ggttcaatcg atagtccaga 360
 catcatccac cctccacttg cccttctgtc cccaccagca gatagatgac tttttatgtg 420
 aggtcccatc tctgattcga ctctcctgng gagatacctc ctacaatgaa atccagttgn 480
 ctgtgtccag tgtcatcttt ggtggntgtg cctctcagcc tcctccttgc ctcttatgga 540
 gccactgccc aggcnggggc tgaggattaa ctttgccnna gccatggaag aaaggtcttt 600
 nggacctngn n 611

<210> 151
 <211> 619
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 415, 417, 427, 516, 524, 536, 544-545, 558, 561, 575, 580, 582, 584, 590, 607, 610, 615
 <223> n = any nucleotide

<400> 151
 gatgcatgct cgagcgggccg ccagtgtgat ggatatctgc agaattcgcc ctttctttat 60
 ttcgaagagt atacactagt ggattgaaga gaaacaaata cataggaagg gcgaattcca 120
 gcacactggc ggcggttact agtggatccg agctcgggtac caagcttgat gcatagcttg 180
 agtattctaa gcgctcacct aaatagcttg gcgtaatcat ggtcatagct gtttctgtg 240
 tgaaattgtt atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtaaa 300

```

gcctgggggtg cctaattgagt gagctaactc acattaattg cgttgcgctc actgtccgct 360
ttccagtcgg gaaacctgtc gtgccagctg cattaatgaa tcggccaacg cgcgngnaga 420
ggccggnttg cgtattgggc gctcttccgc ttctcgctca ctgactcgct gcgctcggga 480
cgtccggctg cggcgagcgg tatcagctta ctcaanggcc gtantacggt tattcncagg 540
aatnnggggt taacgccngg naaagaacat tgtgngccan angncaagcn taatgcccag 600
gaaccgntan aacgntccc
619

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<210> 152

<211> 959

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 139, 203, 209, 211-213, 216, 221, 225, 234, 243, 245, 248, 253, 255, 261, 277-279, 287, 296, 302, 311, 318, 321, 344, 348, 350, 353, 376, 379, 381, 383, 395, 397, 402, 406-407, 414, 420, 429, 436, 438, 448, 450, 452, 463, 476, 481, 483, 496, 499, 502, 517, 520, 523, 527, 530, 535, 537, 539, 542, 549, 550, 558, 570, 571, 579, 580, 584, 587, 596, 605, 609, 634-635, 637-638, 640, 644, 648-649, 663, 665-666, 671, 675, 677, 681, 692, 699, 705, 715, 718, 721, 736, 745, 750, 758, 766, 778-779, 791, 793, 797, 811, 816, 821, 829, 831, 832, 837, 839, 840, 843, 846, 846, 851, 858, 883, 889, 892, 895, 897, 898, 917, 923, 928, 935, 945, 956

<223> n = any nucleotide

<400> 152

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ctcgagcggc gcagtgtgat ggatatctgc agaattcgcc ctccctatgt attattttctc 60
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gaccttctgt ctgaaagana gaccatctcc ttcaatcatt gctccactca gatgtttcta 180
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ccctcaactnc tcttntcntg ctcttctntn cnccggtgct tancttcttg cctgntacg 480
nncgcgcgct catatncgng tntctggatc cctctnntn ttnttctnt cctctnttnc 540
cntctacnnt acttctnctg ctctctccan ncttcgacnn ctncctnctc tccacnacgc 600
acttntctnt ctatatccgc tcttaccgct ctctnnnnan cacncttnc tctgcatac 660
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ctnatnatcg nttattcnaa tcatactccg tactgtttct gtntcttnt cntgncnct 900
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<210> 153

<211> 375

<212> DNA

<213> Unknown (H38g1 nucleotide)

<220>

<223> Synthetic construct

<400> 153

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ttggcctgtg ctgacacatc cttagcccgagggtgagct tccccgacgt tggcctcata 60
tctcttctgt gctttctgct aattctttta tcctacacta gaatcacaat atctatctta 120
agcattcgta caactgaggg ccgtcgccgt gccttctcca cctgcagtgc tcacctcatt 180
gccatctct gtgcctatgg gcccatcatc actgtctacc tgcagccac acccaacccc 240
atgctgggaa ccgtgggtaca aattctcatg aatctggtag gaccaatgct gaacctttg 300
atctatacct tgaggaataa ggaagtaaaa acagccctga aaacaatatt gcacaggaca 360
ggccatgttc ctgag
375

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<210> 154
 <211> 965
 <212> DNA
 <213> Unknown (H38g2 nucleotide)

<220>
 <223> Synthetic construct

<400> 154
 cacacagagc cacggaatct cacagatgtc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcaaccggt cctcgctttg ctctccctgt ccctgtccat gtatctggtc 120
 acggtgatga ggaacctgct cagcatcctg actgtcagct ctgtctctcc cctccacacc 180
 cccatgtact tcttctcttc caacctgtgc tgggctgaca tcggtttcac ctccggccacg 240
 gttccacaga tgatttgtga catgcagtcg catagcagag tcatccctca tgcgggctgc 300
 ctgacgcaga tgtatttctt ggtctttttt gcatgtatag aaggcatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctgc actaccagct catcgtgaat 420
 cctcacctct gtgtcttctt cgttttgggt tccttttttc ttagcctgtt ggattcccag 480
 ctgcacagtt gaatttgtgt acaattcaac atcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaaact gcctgttctg acagcgtcat caatatcatt 600
 ttcataatatt tcgatagtac tatgtttgct tttcttccca tttcagggat cctatggctt 660
 actataaaat cgtccctctc attctaagga tttcatcgtc agatgggaag tataaatcct 720
 tctccacctg tgcctctcac ctacgagttg tttgtgtatt tgatggaaca ggcattggca 780
 tgtacctgac ttcagctgtg tcaccacccc ccaggaatgg tgtggtggcg tcagtgatgt 840
 acgctgtggt cacccccatt ctgaaccttt tcatctatag cctgagaaac aggaacatac 900
 aaagtgcctt gcggaggctg cgcagcagaa cagtcgaatc tcatgatctg ttccatcgtt 960
 tttct 965

<210> 155
 <211> 936
 <212> DNA
 <213> Unknown (H38g3 nucleotide)

<220>
 <223> Synthetic construct

<400> 155
 atggatggag ataaccagag tgagaactca cagttccttc tcctgggggat ctcagagagt 60
 cctgagcagc agcggatcct gttttggatg ttctgtcca tgtacctggc cacggtgctg 120
 ggaaatgtgc tcatcatcct ggccatcagc tctgattccc acctgcacac ccccatgtac 180
 ttcttctctg ccaacctctc ctctactgac ctcttctttg tcaccaacac aatcccccaag 240
 atgctggtga acttccagtc ccagaacaaa gccatctcct atgcaggggtg tctgacacag 300
 ctctacttcc tggctctcct ggtgaccctg gacaacctca tcctggccgt gatggcgat 360
 gatcgctatg tggccacctg ctgccccctc cactatgtca cagccatgag cctggggctc 420
 tgtgtcttgc tcctctcctt gtgttggggg ctgtctgttc tctatggcct cctctcacc 480
 ttctctctga ccaggggtgac cttctgtggg cctcgagaga tccactacct cttctgtgac 540
 atgtacatcc tgcgtgtggc ggcatgttcc aacaccacac tcattcacac agcgttgatt 600
 gccactggct gcttcatctt cctcaccccc ttaggggttca tgaccacatc ctatgtacgt 660
 attgtcagaa ccataccttca aatgccctcg gcctctaaga aatacaaaac cttctctacc 720
 tgtgcctccc atttgggtgt ggtctccctc ttttatggga cgcttgctat ggtgtacctg 780
 cagccccctc atacctactc catgaaggac tcagtagcca cagtgatgta tgctgtgctg 840
 acacctatga tgaacctttt catctacagg ctgaggaaca aagacatgca tggggctccg 900
 ggaagagtcc tatggagacc ctttcagagg cctaaa 936

<210> 156
 <211> 914
 <212> DNA
 <213> Unknown (H38g4 nucleotide)

<220>
 <223> Synthetic construct

<400> 156

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ctggaggctg	tactctgtgc	tgtcttctca	ttcatctacc	tcttcaccct	acttggaat	120
ttactcatcc	ttatagcgat	tgtttcttca	cactcctatg	tatttcttct	tgggacgcct	180
gtctactttt	gacatattgt	tcccatctgt	aacatgtccc	aagatgctat	tgtatctctc	240
tggccagagc	ccagtcatTT	cttttaaggg	atgtgcttca	cagctcttct	tctatcagtt	300
gctgggttct	gctgaaggct	gcctctatTC	tgtgatgtct	tatgatcgct	ttgttgccat	360
acatcacaca	ctgagatata	tgtcatcat	gaagcctgga	gtctgtgtcg	gcttggtcgt	420
gggtgccgggt	tgggtgggtg	tcttcacgcc	accattctga	cctcctttac	ctttcagttg	480
tcctactgtg	gccccaatca	ggtggactac	ttcttctgtg	acattcctgc	tgttttacct	540
ctggcttgta	ctgacagtgc	cctggccag	aggggtgggt	ccataaatgt	tggctttctg	600
gctttaacac	ttttgatcag	tgtctgtgtc	tgctacacta	gcattgggat	tgccatcttg	660
agaatccgct	catcagaggg	caggcagaaa	gccttctcca	cctgcagtgc	tcaccttggt	720
gcaatcctct	gtgcctatgg	acctgtaatc	atcatctatc	tgaagtccac	acccaacccc	780
ttgcttggtg	ccaggtgcaa	atattaaata	atgttgtctc	acccatgctg	aactcgtaa	840
tctattcctt	aaggaacaag	gaagtgaata	ggtccctgaa	aagagtattc	tgaatgttt	900
tacttactgt	ttgt					914

<210> 157

<211> 951

<212> DNA

<213> Unknown (H38g5 nucleotide)

<220>

<223> Synthetic construct

<400> 157

atgggaacag	ataaccagac	ttgggtgagt	gaatttatTC	tcctcggcct	gtccagtgc	60
tgggacactc	gggtctccct	gtttgtcctg	ttcttggtca	tgtatgtggt	gaccgtgctg	120
gggaactgtc	tcattgtcct	tctgatcaga	ctggacagcc	gactccacac	tcccatgtat	180
ttctttctca	ccaacctctc	ccttgtcgat	gtctcctatg	ccacaagtgt	agtccctcag	240
ctgctggcac	attttcttgc	agaacataaa	gccatcccat	tccagagctg	tgcagcccag	300
ttatttttct	ccctggcctt	gggtgggatt	gagtttgttc	tcctggcggt	gatggcctat	360
gaccgctatg	tggctgtgtg	tgatgccctg	cgatactcgg	ccatcatgca	tggagggctg	420
tgtgctaggt	tggccatcac	atcctgggtc	agtggcttca	tcagctctcc	tgtgcagact	480
gctatcacct	ttcagctgcc	catgtgcaga	aacaagtTTA	ttgatcacat	atcctgtgaa	540
ctcctagctg	tggtcaggct	ggcttgtgtg	gacacctcct	ccaatgaggt	caccatcatg	600
gtgtctagca	ttgttcttct	gatgacaccc	ttctgcctgg	ttcttttgtc	ctacatccag	660
atcatctcca	ccatccataa	gatccagtc	agagaaggaa	gaaagaaagc	tttccacacg	720
tgtgcctctc	acctcacagt	ggttgccctg	tgtatgggtg	tggccatttt	cacttacatc	780
cagccccact	ccagtccctc	tgtcccttcag	gagaagttgt	tctctgtctt	ttatgccatt	840
ttaacaccaa	tgctgaaccc	catgatTTAC	agcctaagga	ataaagaggt	gaagggggcc	900
tggcagaaac	tattatggaa	attctcttgg	ttaacatcaa	agctggcaac	t	951

<210> 158

<211> 1025

<212> DNA

<213> Unknown (H38g6 nucleotide)

<220>

<223> Synthetic construct

<400> 158

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gatccagaac	tgcagccgggt	catcgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctggagaaac	tgtcatcat	catggcagtc	agccctgact	tccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttgctc	gacatcggtt	tcacctccac	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcacttc	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tgggaagagag	acatgtctct	gagcgtgatg	360
gcctacgacc	agtttgtagc	catctgtcac	cctcccatat	cgttcagcca	tcttgaaccc	420

gtgtttctgt	ggcttccaag	atttgttgtc	cctgtttttt	tttctttttt	tttttttttc	480
ctcaggcttt	tagactccca	gctgcataac	ttgattgcct	tacaaatgac	ctgcttcaag	540
gatgtggaaa	tttctaattg	cttctgggaa	ccttctcaac	tccccatct	tgcattgtgt	600
gacaccttca	ccaggaacat	caacctgtat	ttccctgctg	ccgtattggg	ttttcttccc	660
atctcgggga	cgcttttttc	ttactgtaaa	attgtttcct	ccattctgag	ggtttcatca	720
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gcctgagaaa	cagggatatg	aaaagtgtcc	tgccggcgcc	gcacagcagc	acggtctaata	960
ctcaatatct	tcttatctgt	tccattcctt	ttgtagggtg	ggttaaaaaa	ggcagcaagg	1020
tcaaa						1025

<210> 159

<211> 936

<212> DNA

<213> Unknown (H38g7 nucleotide)

<220>

<223> Synthetic construct

<400> 159

atggtaaaa	gaaatcattc	cacggtgact	gaatttaatc	tcgctgggct	aacagacaaa	60
ccagagctcc	agctgcctct	tttctctctc	ttcctgggaa	tctatgtggg	cacagtgggtg	120
ggcaacctga	gcatgatcac	tctaataagg	ttcagttctc	acctgcacac	ccccatgtac	180
catttcctca	gcagtctgtc	cttcattgat	ctctgccagt	cttctgtcat	tacccccaaa	240
atgctgggtga	attttgtgtc	agagaggaat	attatctcct	accagcatg	catgactcag	300
ctctacttct	tccttgttct	tgatcatatc	gaatgtcaca	tggtggctgc	aatggcttat	360
gaccactaca	ttgccatatg	taacccactg	ctttaccatg	tcgccatgtc	ttatcagggtc	420
tgctcctgga	tggtagttga	gggtgatttt	atgggcttta	ttgggtgctac	gtgctcacac	480
agtctgcatg	ctaagagtgc	ttttctgtaa	ggctgatgta	atcaaccatt	acttctgtga	540
tcttttccca	ctactggagc	tctcccgtct	cagtatttct	atcaatgaaa	tagtagtttg	600
tgcttcagtg	catttaatat	ccttttccgc	agcctcacca	tccttagctc	ttacatcttc	660
atcggttgcca	gcacctctct	cattcgctcc	actgagggca	ggtcacaaaac	cttcagcact	720
tgcaagctccc	acatctcggc	tgtttctggt	ttctttgggt	ctgcagcatt	catgtacctg	780
cagccatcat	cgtcagctc	catggaccag	gggagtgctc	tctgtgtttt	atgctactgt	840
tgtgcccattg	ctgaaccccc	aatctacagc	ctgaggaata	aagatgtcaa	agttgcctta	900
attaagttcc	ttgaaaaaag	aagtttctctg	tgaaaag			936

<210> 160

<211> 985

<212> DNA

<213> Unknown (H38g8 nucleotide)

<220>

<223> Synthetic construct

<400> 160

atggggtcagg	aaaataaaaa	ccagacatgg	gtgagtgagt	tcattctgct	ggggatttcc	60
agtgaattggg	gcattcaggt	atccctcttc	gccctgatcc	tggccatgta	tttgggtgact	120
attttaggaa	acacctcat	tcttcttctg	atcagactgg	acaacaggct	tcataccccc	180
atgtacttct	cccttagtgt	tctgtcattt	gtggactttt	gttatacaaa	gagtattgtc	240
ccacaaatgc	tgtcccactt	gctctcagcc	cgaaagtcca	tcccattcta	cagttgtgtg	300
ctccagctct	atgtttctct	ggcatttgtt	gggtctgagt	tcttctgct	gggggccatg	360
gcctatgacc	gctacgtggc	cgtgtgccac	ccactgcact	acacggtcac	catgcatgga	420
gggctgtgcc	tggggctggc	ggccagccgc	ctgggtggctg	gcttctcaaa	ttccctgatg	480
gaaacaatta	tcaccttcca	gcttctgtg	tcacgggtgtt	atcaatcact	ttgtctgtga	540
gaccttagca	gtgctacagc	tagcctgtgt	ggatgtcccc	ttcaacaagg	tcattggtggc	600
catctcaggg	tttctgggtga	tcttgcttcc	ctgttccctg	gttctattct	cctatgcttg	660
catagttgcc	accattttgt	gcattcgttc	tacccaggta	cgctgcaaag	cctttgggac	720
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gggtgtcaccc	atgttgaacc	ccttgatcta	cagcttgagg	aataaggaag	ttacggctgc	900
tgtccgga	gttttagaaa	gatgcagata	aagggtcaag	actctaagaa	cctcttggtta	960
tctatcatca	aaacccaaaa	ggaga				985

<210> 161

<211> 954

<212> DNA

<213> Unknown (H38g9 nucleotide)

<220>

<223> Synthetic construct

<400> 161

atggaccaaa	gcaattatag	ttctttacat	ggttttatct	tgcttggctt	ctctaaccat	60
ccaaaaatgg	agatgatcct	gtcaggaggt	gtcgccatct	tctacttaat	tacattgggtg	120
ggtaacacag	ccatcattct	tgcatctctc	ctggattccc	agcttcatac	accaatgtac	180
tttttccctca	gaaattttatc	tttccctagat	ctatgtttca	caaccagcat	catccctcag	240
atgctgggtca	acttgtgggg	acctgataag	accatcagct	atgtgggttg	tatcatccaa	300
ctctatgttt	acatgtgggt	gggtcaggt	gagtgccttc	tcctggctgt	tatgtcctat	360
gatcgtttta	cagctatatg	taagcccttg	cattattttg	tagtcatgaa	cccacatcta	420
tgtctaaaga	tgattatcat	gatctggagt	attagtttg	ccaattctgt	agtattatgt	480
acactcactc	tgaatttgcc	cacatgtgga	aacaacattc	tggtcattt	cttgtgtgag	540
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tgtggatctc	atcttactgt	agtgtctatg	ttctatggaa	ctattatcta	catgtacctg	780
caaccaggta	acagggcttc	caaagaccag	ggcaagttcc	tcaccctctt	ttacaccgtc	840
atcactccaa	gtctcaaccc	gctcattttac	accttaagaa	ataaggacat	gaaggatgcc	900
ctgaagaaac	tgatgagatt	tcaccacaaa	tctacaaaaa	taaagaggaa	ttgc	954

<210> 162

<211> 970

<212> DNA

<213> Unknown (H38g10 nucleotide)

<220>

<223> Synthetic construct

<400> 162

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gatccagagc	tgcagtcggg	cctcgttttg	ctgtccctgt	ccctgtccac	gtatctggcc	120
acgggtgctga	ggaacgtgtc	caacatcctg	gctgtcagct	ctgactcccc	cctccacacc	180
cccattgtact	tcttcctctc	caacctgtgc	tgggctgaca	tcggtttcac	ctcggccacg	240
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cctcacctct	gtgtcttttt	cgttttgggtg	tcctttttcc	ttagcctgtt	ggattcccag	480
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gtctgtgacc	cctctcaatt	tctcaaaact	gcctgttctg	acagcgtcat	caatagcata	600
ttcacgtatt	tccatagtac	tatgtttggg	tttcttccca	tttcagggat	ccttttttct	660
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acgctgtggg	caccccatg	ctgaaccttt	tcattctacag	cctgagaaac	agggacatac	900
aaagtgcctt	gcggaggctg	ctcagcagaa	cagtcgaatc	tcattgatctg	ttccatcggt	960
tttcttgtgt						970

<210> 163

<211> 933

<212> DNA

<213> Unknown (H38g11 nucleotide)

<220>

<223> Synthetic construct

<400> 163

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gaaaacgtga	tcatcatcct	attggtgctg	caaaatcggc	cactgcacaa	gcctatgtac	180
ttcttcctgg	ccaacctgtc	cttcttggag	acctgggtaca	tctctgtgac	tgtgcccag	240
ttactgttta	gttttttggc	tgtgaacaac	agcatctctt	tcacactctg	tatgatacaa	300
ctgtacttct	tcattgctct	catgtgcaca	gaatgtgtgc	ttctggccgc	catggcctat	360
gaccggtatg	tggccatctg	tcgcccactc	cactacccaa	ccataatgag	ccatgggctc	420
tgtctccgcc	tcgtcttgg	ttcctgggcc	attggctttg	gcactctccct	ggcgaagatc	480
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atcctggcac	tggtcactct	cgttatccca	ctctttatta	ctgtcctgtc	ctacggatgc	660
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ccttctctca	accctttcat	ttattgccta	agaaaccgag	aggtcaagga	agctctgaag	900
aaactggcat	attgccaggc	cagcagatct	gac			933

<210> 164

<211> 939

<212> DNA

<213> Unknown (H38g12 nucleotide)

<220>

<223> Synthetic construct

<400> 164

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gccaggtctg	agcagctgct	ctttgttata	ttcctgtctc	tctacctgtt	cactctgggc	120
accaatgcaa	tcatcatttc	caccattgtg	ctggacagag	cccttcatac	tcccatgtac	180
ttcttccttg	ccatcccttc	ttgctctgag	atttgctata	cccttgtcat	tgtacccaag	240
atgctgggtg	acctgctgtc	ccagaagaag	accatttctt	tcctgggctg	tgccatccaa	300
atgttttctt	tcctctctct	tggctcctct	cactccttcc	tgtctggcagc	catgggctat	360
gatcgctata	tggccatctg	taaccactg	cgctactcag	tgtctatggg	acatggggtg	420
tgtatgggac	taatggctgc	tgctgtgtgc	tgtgggttca	ctgtctccct	ggtcaccacc	480
tccttagtat	ttcatctgcc	cttccactcc	tccaaccagc	tccatcactt	cttctgtgac	540
atctcccttg	tccttaaaact	ggcatctcag	cactccgggt	tcagtcagct	ggtcatatct	600
atgcttgggt	tatttgcctt	ggtcattcct	ctgctactta	tcctagtctc	ctacatccgc	660
atcatctctg	ccattctaaa	aatcccttcc	tccgttggaa	gatacaagac	cttctccacc	720
tgtgcctccc	atctcattgt	ggtaactgtt	cactacagtt	gtgcctcttt	catctactta	780
aggcccaaga	ctaattacac	ttcaagccaa	gacaccctaa	tatctgtgtc	atacaccatc	840
cttaccatcc	tgttcaatcc	aatgatttat	agtctgagaa	ataaggaatt	caaatacagc	900
ctacgaagaa	caatcggcc	aactttctat	cctcttagt			939

<210> 165

<211> 954

<212> DNA

<213> Unknown (H38g13 nucleotide)

<220>

<223> Synthetic construct

<400> 165

tgtgtcgatt	cttctttaaa	atgagaaatc	acacagtgat	gtctgagttt	gttactgtga	60
atggctgagg	gctggagatt	gtatttcatt	atcctgatta	tatcttataa	attttgtacc	120
cttttgggaa	atgttatatt	caggaccctt	gtttgttctt	tgggatttca	cacatcatgc	180
atgtattttt	ttccttgaaa	aatatcattg	tgattggcat	gagtttgtct	tcaattattg	240

ctttaccttc	aacgcagaaa	tgagccatca	atgttcaggg	tgctgctgtc	catgttttct	300
cctttccttg	cctgtactgc	cccagatct	tcttgcatte	actgacacag	tgccaccctt	360
ttattgccat	tgatatcca	ctgcaaggta	tgacacccat	tacacacaaa	ctgtatatac	420
tgctcaccac	agggccctgg	agaggctgct	agctacatgt	caatctcctg	atgctatatt	480
aggcagctac	cctaatectg	tgccaacgaa	gttatggctg	tcattcccat	cacattcctg	540
aagtcaaaact	gtgacctatg	caagcatata	ctaagcccta	tgccggtctc	tctctctgtc	600
tctctcttag	tctctctctc	tctttctctc	tcttttccat	tatttccata	tcttataatct	660
gcaatgaaat	tgacatacca	aaaattatct	ctgcagacag	tgtgcatgga	gctttctcaa	720
cctgccttgc	tcacctcttt	gctttctcaa	cctgcattgc	tcaacctgca	gtctgcaact	780
ccttggtggcc	atggacagaa	gctcagaccg	agagctctct	gcgattctgt	gattcagaga	840
ccgaacttgt	gtgtgaccat	ctccttgaac	tccttgattt	ctagcctgag	aaatgaaagt	900
gtgaaacaag	cttcacataa	aatattttaa	gaacaaactt	tattcatgaa	aata	954

<210> 166

<211> 998

<212> DNA

<213> Unknown (H38g14 nucleotide)

<220>

<223> Synthetic construct

<400> 166

atggatggag	agaatcactc	agtggatatct	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggtgggtgtg	gagatgggtgc	tgctcatagc	catggccttt	360
gacagttatg	tgcccttatt	aagccccctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggacc	ttggtgtcag	tcactccctg	ttccaactgg	480
caattcttgt	taattttacc	ttctgtggcc	ctaattgtgtt	ggacagcttc	tactgtgacc	540
ttcctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atgggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tctaactctc	tacatcttca	660
tcctgtttac	tgtttgga	cattcctcag	gtgggttcac	caaggccctt	tccactcttt	720
cagctcacag	cacagcggtc	cttttgttct	ttggtccacc	catgtttgtg	tatacatggc	780
cacaccctaa	ttcacagatg	gacaagtctc	tggctatttt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaa	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaa	acatga	tatggcttta	tgtttctttc	tttgatat		998

<210> 167

<211> 966

<212> DNA

<213> Unknown (H38g15 nucleotide)

<220>

<223> Synthetic construct

<400> 167

cacacagggc	cacggaatct	cacagatgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgacagccact	cctcactttg	ctgtccctgt	ccctgtccat	gtatctgggtc	120
acgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgactcccc	cctccacacc	180
cccatgtact	tcttctctc	caacctgtgc	tgggctgaca	tcgggtttcac	ctaggccaca	240
gtccccaaga	tgattgtgga	catgcagtcg	catagcagag	tcattctctca	tgccggtctgc	300
ctgatacaga	tgtctttatt	agtccttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	actgctttgt	agccatctgt	tgccctctgc	actaccaggt	catcgtgaat	420
cctcaccctt	gtgtcttctt	cgttttgggt	tcctttctcc	ttagcttgtt	ggattcccag	480
ctgcacagtt	ggattgtgtt	acaattcacc	atcatcaaga	atgtggaaat	ctctaattct	540
gtctgtgacc	cctctcatct	tctcaaaactt	gcttgtttctg	acagcgtcat	caatagcata	600
ttcatatatt	tcgatagtac	tatgtttgggt	tttcttccca	tttcagggat	cctatgggtct	660
tactataaaa	tcgtcccctc	cattctcagg	atttcatcgt	cagatgggaa	gtataaagcc	720

ttctccacct	gtgcctctca	cctagcagtt	gtttgctgat	tttatggaac	aggcattggc	780
atgtacctga	cttcagctgt	gtcaccaccc	cccaggaatg	gtgtggtggc	gtcagtgatg	840
tacgctgtgg	tcacccccat	gctgaacctt	ttcatctaca	gcctgagaaa	cagggacata	900
caaagtgcc	tgcgagggt	acgcagcaga	acagtgaat	ctcatgatct	gttccatcgt	960
ttttct						966

<210> 168

<211> 837

<212> DNA

<213> Unknown (H38g16 nucleotide)

<220>

<223> Synthetic construct

<400> 168

atgtacctgg	ccactgtcct	ggggaacctg	ctcatcatcc	tggccataag	catagactcc	60
cgccctgcaca	cccccatgta	cttcttcctc	agcaacatgt	cctttgtgga	caactgcttc	120
tccaccaccg	tccccaatg	gctggccaat	cacatactca	ggactcaaac	catctccttc	180
tctggctgtc	tcatgcagat	gtatttttatc	agtgaagctg	ctgacatgga	caatttcctc	240
ctggctgtga	tggcctatga	ccgctttgtc	gccgtgtgcc	gccccttaca	ttacacagca	300
aagatgaccc	atcagctctg	tgccctgctg	gtcactggat	catgggtggt	tgccaactcg	360
aatgctctgc	tgcacaccct	gctgatggct	cgactctcat	tctgtgcaga	caacaccatc	420
ccccacatct	tctgcgatgt	gactccccctc	ctgaaactct	cctgttcaga	cacacacctc	480
agtgaagtga	tgattcttac	tgaggctgcc	ctagtcacga	tcaccccat	tctttgcctc	540
ctggcttctc	atatgcacat	cacctgcgtt	gtcctgaggg	tcccatccac	aaagggaaga	600
tggaaagcct	tctccacctg	tggctcccac	ctggctgtgg	ttctcctctt	ctatggcacc	660
atcatgtctc	catatttcag	aacttcaccc	tcccactcag	ctcagagaga	tatagcagct	720
gctgtgaggt	tcacagtggg	gactcccgtg	atgaatcctt	tgatctacag	cctgaggaac	780
aaggacataa	aaggggctct	tgtaaaagtg	gttgctgtga	aatttttttc	tgttcaa	837

<210> 169

<211> 770

<212> DNA

<213> Unknown (H38g17 nucleotide)

<220>

<223> Synthetic construct

<400> 169

ttcattctct	ggggtttctt	tgaccacccc	tagccggaaa	tgtttctctt	cataatgggg	60
cttggttgctt	atctctgcat	actggtggac	aacatctcaa	ttattgtggt	accaggggga	120
tatttttaggg	gagcaccaaa	tgcatcattt	tagctgtgac	gtctttggat	ccttacattg	180
ccatctgcaa	acacttgagg	taccagctca	tcatgcacga	gcaactctgt	gtcctcctag	240
tggccatggc	atggctaagc	agtttgcca	actctacttc	agtcacccct	tgccgtccag	300
ctgccactag	gcggaacaaa	gggtggacgac	tttctgtgtg	aggtctcagc	gatgatcaag	360
atatcacgtt	ttgacaccac	attcaatgta	tctatgctct	ccattgtgag	gatatttttag	420
tccctcgttc	tctaataaat	tatctttgct	tactgtggat	tcattgtagc	tactgtgctg	480
aggattcagt	cctcaggggg	aaagaaggag	gtcttcaaca	catgtgggtc	tcataattgta	540
tctctcctct	atgggcctgt	aattagcatg	tatgtacagc	cctctgccaa	ctcccaggac	600
aaaaacaaat	tcatgtccct	gttctacagt	ttggtgactc	ctatgcttaa	ccctttttatc	660
tacactttga	gcaacagggg	cataaaaagg	gcaatgagga	ggcttcttgt	ctttttgtat	720
caccaggaag	agaacaaaaa	taattatttt	tatactccac	attcttcata		770

<210> 170

<211> 1003

<212> DNA

<213> Unknown (H38g18 nucleotide)

<220>

<223> Synthetic construct

<400> 170

tctacagacc	cacagaatgt	aacggatgtc	tctcgattcc	tcctcctcaa	actctcagag	60
gatccagaac	tgcagccggg	ccttgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctggggaacc	tgctcatcat	cctggccgtc	agccctgact	cccacctcca	cacttccatg	180
tacttcttcc	tctccaacct	gtccttgcc	gacatcggtt	tcctctcccc	cacgggtcccc	240
aagatgggtg	tggacatcca	atctcacagc	agtcatctcc	tatgcagggt	gcctgactca	300
gatgtctctc	tttgccattt	ttggaggcat	ggaagagaca	catgctcctg	aatgtgatgg	360
cctatgtccg	gtttgtagcc	atctgtcacc	ctctatatca	ttcagccatc	atgaaccctg	420
gtttctgtgg	cttcttactt	ttgttgctct	ttttttttct	cggctcttta	gacgcccagc	480
tgcacaacat	gattgcctta	caaatgacct	gcttcaagga	tgtggaaatt	cctaatttct	540
ctgtgatcc	ttctcaactc	ccccatcttg	catgttggtga	caccttcacc	aataacatca	600
tcattgtatt	ccctgtgcc	gtatttggtt	tccttcccat	ctcggggacc	cttttctctt	660
actctaaaat	tgtttctctc	attctgaggg	ttctgctatc	aggtgggaag	tataaacctt	720
ctccacctgt	gggtctcacc	tgctcagttt	ttgctgattt	tatggaacag	gcattggagg	780
gtacctcagt	tcagatgtgt	catcttccct	gagaaagggt	gcagtggcct	cactgatgta	840
caagatggtc	acccccatgc	tgaaccctc	catctacagc	ctgagaaaca	gggatattaa	900
aagtgtcctg	cggcagccgc	acggcagcac	ggtctaattc	caagaccttc	ttatctgttc	960
cattcctttt	gtagtgtggg	ttaaaaaagg	cagcaagggtc	aaa		1003

<210> 171

<211> 998

<212> DNA

<213> Unknown (H38g19 nucleotide)

<220>

<223> Synthetic construct

<400> 171

atggatggag	agaatcactc	agtggatatc	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaacatccc	tcatgttatt	ttctgtgacc	actgacctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgattttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tgggtggtgtg	gagatgggtgc	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccccctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggaccc	ttggtgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taatttacct	ttctgtggcc	ctaattgtgt	ggacagcttc	tactgtgacc	540
ttcctcggct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atgggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tgtaatctcc	tacatcttca	660
tcctgtttac	tgtttgaaa	cattcctcag	gtgggttcac	caaggccctt	tccactcttt	720
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ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaca	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttcttg	960
ttaaacatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 172

<211> 1018

<212> DNA

<213> Unknown (H38g20 nucleotide)

<220>

<223> Synthetic construct

<400> 172

gatacagacc	cacagagtct	aacagatgtc	tctatatctc	tcctcctcga	actctcagag	60
gatccagaac	tgcagccggg	cctcgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctcaggaacc	tgctcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtcctttcct	gacagtcgtt	tcacctccac	cacagtcctcc	240
aagatgattg	tggacatcca	gtctcacagc	agagtcattc	cctatgcagg	ctgcctgact	300
cagatgtctc	tctttgccat	ttttggagac	atggaagaga	gacatgttcc	tgagtgtggg	360

ggcctatgac	cggtttgtag	ccatctgtca	ccctttatat	cgttcagcca	tcttaaacc	420
ctgtttctgt	ggcttcctag	attcgttgtc	cttgtttttt	tttttttttt	tttctcagtc	480
tttttagactc	ccagctgcac	aacttgattg	ccttacaaat	gacctgcttc	aaggatgtgg	540
aaattcctaa	tttcttctgg	gaaccttctc	aactcccca	tcttgcattg	tgtgacatct	600
tcaccaggaa	catcaacctg	tatttccctg	ctgccatatt	tggttttctt	cccatctcgg	660
ggacgctttt	ctcttactat	aaaattgttt	ccttcattct	gaggggttca	tcacagggtg	720
ggaagtataa	accttctccg	cctgtgggtc	tcattctgtc	gttgtttact	gagtttatgg	780
aacaggcttt	ggagggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	agggtgcagt	840
ggcctcagtg	atgtacacgg	tggtcaccac	catgctgaac	cccttcattc	acagcctgag	900
aaacggggat	attaaaagt	tcctgcggca	gccgcacggc	agcacagtct	aatctcaata	960
tcttcttate	tgttccattc	ctttttagtg	gtgggttaaa	aaaggcagca	aggtcaaa	1018

<210> 173

<211> 942

<212> DNA

<213> Unknown (H38g21 nucleotide)

<220>

<223> Synthetic construct

<400> 173

atggagacaa	gaaaatactc	tgccatgact	gaattctttc	tgggtggggct	ttcccaatat	60
ccagagctcc	agctttttct	gttccctgctc	tgccatcatc	tgtacatgat	aatcctcctg	120
ggaaatagcc	tcctcattat	catcaccatc	ttggattctc	gcctccatac	tcccatgtat	180
ttctttcttg	gaaacctctc	attcttggac	atctgttaca	catcctcacc	cattcctcca	240
atgcttatta	tatttatgtc	tgagagaaaa	tccatctcct	tcattggctg	tgctctgcag	300
atggttgtgt	cccttggtct	gggtccactc	gagtggtgct	tcctggctgt	gatggcctat	360
gaccactatg	tggccatctg	caaccactg	agggtactcc	tcacatgaa	cggagtgtgt	420
tatgtgcaaa	tggctgcatt	gtcctggatc	ataggctgtc	tgacctccct	attgcaaaca	480
gttctgacaa	tgatgttgcc	tttctgtggg	aataatgtca	ttgatcatat	tacctgtgaa	540
attttggccc	ttctaaaact	tgtttgttca	gatataacca	tcaatgtgct	tatcatgaca	600
gtgacaaata	ttgtttcact	ggtgattctt	ctactgttaa	ttttcatctc	ctatgtgttt	660
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tgttcagcgc	actcgattgt	ggtcattctt	ttctacgggt	cagccctttt	tatgtacatg	780
aaacccaagt	caaagaacac	taatacatct	gatgagatta	ttgggtgtgc	ttatggagtgt	840
gtaagcccaa	tgttaaatcc	catcatctat	agcctcagga	ataaagaggt	caaagaggct	900
gtaagaaaag	tcctgagcag	acatctgcat	ttattgaaaa	tg		942

<210> 174

<211> 958

<212> DNA

<213> Unknown (H38g22 nucleotide)

<220>

<223> Synthetic construct

<400> 174

atgaagaata	aaaggaatgt	gactgaattc	gttttaacag	gtcttacaca	gaaccctaaa	60
atggagaaaag	tcattgtttg	agtatttttg	gttctttaca	tgataacact	ttcaggcaac	120
ctgctccttg	tggttacaat	taccaccagc	caggctctta	gctcccccat	gtacttcttc	180
ctgagccacc	tttctttgat	agacacagtt	tattcttctt	cttcagctcc	taagttgatt	240
gtcgattccc	ttcatgagaa	gaaaatcacc	tccttttaag	ggtgtatggc	tcaagcctat	300
gaagaacaca	tttttgggtg	tactgagatc	atcctgtgtg	cagtgtatggc	ctgtgacaac	360
tatgtggcca	tctgcaaac	tctgcactac	acaaccatca	tgagccacag	cctgtgcatt	420
ctcctagtgg	tagtggcctg	gataggagga	tttctccatg	caaataattc	gattctattt	480
acagtatggc	tgcccttctg	tgcccccaat	gtcatagacc	acttcattgt	tgacttgtgc	540
cctttgttaa	aacttgtttg	cctggacact	catacccttg	gtctctttgt	tgctgccaac	600
agtgggttca	tctgtttatt	aaacttctt	ctctaggtgg	tatcctatgt	gatcatcttg	660
agatgtttaa	agaactatat	cttggagggg	aggggttaaag	ccctctccac	ctgtatttct	720
cacatcataa	tagttgtctt	attctttgtg	ccttgtatat	ttgtgtatct	gcacccagtg	780
acaaactctg	cccattgata	aagctgctgc	tgtattttat	actatgggtg	tcccaatgtt	840

aaatcctttg atctacacac tcagaaatgc tgaggtaaaa agtgcaataa ggaagctttg 900
gagaaaaaaa gttatttcag ataatgacta aataagacca ttgagcactc atcataga 958

<210> 175.

<211> 933

<212> DNA

<213> Unknown (H38g23 nucleotide)

<220>

<223> Synthetic construct

<400> 175

atgaggaatt	tctcgggtgt	gtccgaattc	atcctgctgg	gcacccctca	cacggagggt	60
ctggagacta	ttctgttgg	cctgtttttg	tccttctaca	tcttcaccct	tatggggaac	120
ctgctcatct	tgctggctat	tgtctcctct	gctcggtctc	acacgcccct	gtacttcttc	180
ctgtgcaagc	tgtctgtttt	tgacctat	ttcccttctg	tgagttcccc	taagatgctg	240
tgctatcttt	cagggaaacag	ccgagccatc	tcctatgcag	gctgtgcate	ccagctcttc	300
ttctaccatt	tcctgggctg	cactgagtgt	ttcctgtaca	cggtgatggc	ctacgaccgc	360
tttgttgccca	tttgtcaccc	tctacgctac	accataatca	tgagccacag	agcatgtatc	420
atcctagcca	tggggacctc	attctttggc	tgcatccagg	ccacctttct	gaccactctc	480
accttccaat	tgccctactg	tgtccccaat	gagggtggact	attatttctg	tgatatccca	540
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gccacactca	ccgccatcct	gcttttttac	atgccagtgg	tcctcattta	cctgaggcct	780
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ctgaaccctt	taatctacag	tctcaggaat	aaggaggtga	aattatcact	aaggaaggctc	900
ttatatcagc	tgggcttcct	tcctgagcag	ttg			933

<210> 176

<211> 906

<212> DNA

<213> Unknown (H38g24 nucleotide)

<220>

<223> Synthetic construct

<400> 176

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gtacagagag	ttctctttgt	gggtctttttg	ctgatctatg	tggtcacggg	ttgtggcaac	120
atgctcattg	tggtcactat	cacctccagc	cccacgctgg	cttcccctgt	gtattttttc	180
ctggccaacc	tatcctttat	tgacaccttt	tattcttctt	ctatggctcc	taaacctcatt	240
gctgactcat	tgtatgaggg	gagaaccatc	tcttatgagt	gctgcatggc	tcagctcttt	300
ggagctcatt	ttttgggagg	tggtgagatc	attctgctca	cagtgatggc	ttatgaccgc	360
tatgtggcca	tctgtaagcc	cctgcacaat	actaccatca	tgaccaggca	tctctgtgcc	420
atgctttag	gggtggcttg	gcttgggggc	ttcctgcatt	cattggttca	gctcctcctg	480
gtcctttggg	tgcccttctg	tgggcccatt	gtgatcaatc	actttgcctg	tgacttgtac	540
cctttgctgg	aagttgcctg	caccaatacg	tatgtcattg	gtctgctggg	ggttgccaac	600
agtggtttaa	tctgcctgtt	gaacttcctc	atgctggctg	cctcctacat	tgtcatcctg	660
tactccttga	gggtcccacag	tgagatggg	agatgcaaag	ccctctccac	ctgtggagcc	720
cacttcattg	ttgttgccct	gttctttgtg	ccctgtatat	ttacttatgt	gcattccattt	780
tctactttac	ctatagacaa	aaatatggca	ttattttatg	gtattctgac	acctatgttg	840
aatccactca	tttataccct	gagaaatgaa	gaggtaaaaa	atgccatgag	aaagctcttt	900
acatgg						906

<210> 177

<211> 798

<212> DNA

<213> Unknown (H38g25 nucleotide)

<220>

<223> Synthetic construct

<400> 177

atgatcacac	tgattgggct	cagttctcac	ctgcacacac	ctatgtacta	tttcctcagc	60
agtctgtcct	tcattgactt	ctgccattcc	actgtcatta	cccctaagat	gctgggtgaac	120
tttgcgacag	agaagaacat	catctcctac	cctgaatgca	tggctcagct	ctattttattc	180
agtatttttg	ctattgcaga	gtgtcacatg	ttggctgcaa	tggcgtatga	ctgttatgtt	240
gccatctgca	gccccttgct	gtacaatgtc	atcatgtcct	atcaccactg	cttctggctc	300
acagtgggag	tttacatttt	aggcctcctt	ggatctacaa	ttcataccag	ttttatgttg	360
agactctttt	tgtgcaagac	taatgtgatt	aaccattatt	tttgtgatct	ttccctctc	420
ttggggctct	cctgtctcag	cacctacatc	aatgaattac	tggttctggg	cttgagtgca	480
tttaacatcc	tgatgcctgc	cttaaccatc	cttgcttctt	acatctttat	cattgccage	540
atcctccgca	ttcactccac	tgagggcagg	tccaaagcct	tcagcacttg	cagctcccac	600
atcttggctg	ttgtgttttt	ctttggatct	gcagcattca	tgtacctgca	gccatcatct	660
gtcagctcca	tggaccagag	gaaagtgtcg	tctgtgtttt	atactactat	tgtgcccattg	720
ctgaaccccc	tgatctacag	cctgaggaat	aaagatgtca	aacttgccgt	gaagaaaatt	780
ctgcatcaga	cagcatgt					798

<210> 178

<211> 954

<212> DNA

<213> Unknown (H38g26 nucleotide)

<220>

<223> Synthetic construct

<400> 178

atgggaaact	ctaatacagtc	tttcatgaca	gaatttgtcc	tgctggggct	ttctggctac	60
ccagagctag	aggccattta	ctttgtgctg	gtcctatgta	tgtattttgg	gatcctgttg	120
ggaaatggag	tcatacatcat	tgtgagtgtt	tatgacaccc	acttgcacac	ccccatgtac	180
tttttccctca	gtaacttatc	attcttggac	atctgtacac	ctagtccatc	tattccacta	240
tttctcagca	gcttcttaac	gtcaaagaaa	actatttcct	tctctgggtg	tggagtgcac	300
atgtttctct	cttttgcctat	gggagcaaca	gagtgtgtcc	ttctaagtat	gatggcggtt	360
gactgctatg	tggccatctg	taaccctcta	tgatacccta	tcatacatgag	caaggcttca	420
tacatgtcca	tggctgcggg	gtcctggatt	ggaggaggca	tcaattctgt	gttgcaaacc	480
tcccttgcaa	tgcggcttcc	tttctgtgga	gataacgtca	ttaatacattt	tacttgtgaa	540
atcttggctg	tcttaaaaatt	ggcctgtgct	aatatctcca	ttaataattat	tagcatgggt	600
gttgctagta	tgatttttct	tgtaggggca	gtacttttta	tttttgttac	atatgttttt	660
attctctcca	ccatcctgag	aattccttct	gcagaaggaa	ggcacaaaagc	ctcctccacc	720
tgtctgtccc	acctaacagt	ggtgattata	ttctacagaa	ccatcctttt	catgtatgca	780
aagcccaagg	ctaaagactc	ttctggtgca	gacaaagaac	aagtcacaga	caaaatcatc	840
tccctgttct	atggagtggg	gacacctatg	cttaatcctc	ttatctatag	tttgaggaaac	900
aaagacgtga	aggcagctgt	gaagagtata	ctgtgacaaa	aatgcttctt	ggaa	954

<210> 179

<211> 984

<212> DNA

<213> Unknown (H38g27 nucleotide)

<220>

<223> Synthetic construct

<400> 179

aaatctatga	aaaagatgaa	caatgtaata	gaattcatac	tgctggggct	cactcacaat	60
ccagaactgc	agaaattctt	gtttgttatg	tttttaatac	cctacttgat	cacattggca	120
ggtaacctgt	tcatactcag	catcatcttc	atcagcccag	ccctgggttc	ccccatgtac	180
tcttttccgt	cctattttgt	cattatagac	attttctgct	cttcttccat	agccccataa	240
atgaactttg	acttgatctc	tgaaaagaac	accataatct	tcaatggctg	catgactcag	300
ctcttcacag	aacatttctt	tacagaacat	ttctttgagg	cagctgagat	catcttatta	360
agtgtcatgg	cctatgacca	ctatgtggcc	atccgtaacg	ccttgcaacta	tgcaaccatc	420
atgagccaac	ctatgtgtgg	attcctgatg	gtgggtggctg	ggattctggg	atttgtgcat	480

ggagggatcc	agactttgtt	catagcccag	ttaccattct	gtggccccc	tgtcatcaac	540
cactttatgt	gtgatttagt	acctcttctg	gagctggcct	gcacagacac	tcacaccttg	600
gggacctga	ttgctgcca	cagtgggtca	ctgtgtttcc	tcattttttc	catgctgggt	660
gcttcctatg	tcatactcct	gtgcttccct	aggactcata	gctctgaagg	gcgtcgcaaa	720
gctctgtcta	gttggtgcctc	tcatactctc	attgtcatct	tattctttgt	ccctttttca	780
tacctgtatc	taagacctaa	cctccttccc	cactgacaaa	gctgtgactg	tgttttgcac	840
cctatttaca	cctatgttga	accctttaat	ctacaccctc	aaaaataaag	aagtgaaaaa	900
tgtcattaag	aagctctgga	agcaaataat	gacaactgat	gataaataag	tcttgtgaca	960
caaacattta	ggcaagaata	tctg				984

<210> 180

<211> 954

<212> DNA

<213> Unknown (H38g28 nucleotide)

<220>

<223> Synthetic construct

<400> 180

atggaatggg	aaaaccacac	cattctgggtg	gaattttttc	tgaagggact	ttctggtcac	60
ccaagacttg	agttactctt	ttttgtgctc	atcttcataa	tgtatgtggg	catccttctg	120
gggaatggta	ctctcatttt	aatcagcatc	ttggaccctc	accttcacac	ccctatgtac	180
ttctttctgg	ggaacctctc	cttcttggac	atctgtctaca	ccaccacctc	tattccctcc	240
acgctagtga	gcttcctttc	agaaagaaag	accatttccc	ttctggctg	tgcatgacag	300
atgttcctcg	gcttggccat	ggggacaaca	gagtgtgtgc	ttctgggcat	gatggccttt	360
gaccgctatg	tggctatctg	caaccctctg	agatatccca	tcatactgag	taaggatgcc	420
tatgtaccca	tggcagctgg	gtcctggatc	ataggagctg	tcaattctgc	agtacaatca	480
gtgtttgtgg	tacaattgcc	ttcttgcagg	aataacatca	tcaatcattt	cacctgtgaa	540
attctggctg	tcatgaaact	ggcctgtgct	gacatctcag	acaatgagtt	catcatgctt	600
gtggccacaa	cattgttcat	attgacacct	ttgttattaa	tcattgtctc	ttacacgtta	660
atcattgtga	gcatcttcaa	aattagctct	tccgagggga	gaagcaaagc	ttcctctacc	720
tgttcagccc	atctgactgt	ggtcataata	ttctatggga	ccatcctctt	catgtacatg	780
aagcccaagt	ctaaagagac	acttaattcg	gatgacttgg	atgctaccga	caaaattata	840
tccatgttct	atgggggtgat	gactcccatg	atgaatcctt	taatctacag	tcttagaaac	900
aaggatgtga	aagaggcagt	aaaacaccta	ctgaacagaa	ggttcttttag	caag	954

<210> 181

<211> 792

<212> DNA

<213> Unknown (H38g29 nucleotide)

<220>

<223> Synthetic construct

<400> 181

atggtagaca	acctaatacat	tgtgggtgaca	atcaccacca	gcccagccct	ggactcccc	60
gtgtattttt	ttctgtcttt	cttttccctc	atagatggct	gctcctcttc	taccatggcc	120
cccaaaatga	tatttgactt	actcactgaa	aagaaaacta	tttccctcag	tgggtgcatg	180
acccagctct	ttgtagaaca	tttctttggg	ggagttgaga	tcattctgct	cgtgggtgatg	240
gcctatgact	gctatgtggc	catctgcaag	cccctgtact	acctgatcac	aatgaacagg	300
caggatgtg	gcctcctggg	ggccatggca	tgggtcgggg	gatttcttca	cgctctgatt	360
caaagtcttt	taatagtctg	gctggccttc	tgtggcccca	atgtcattga	ccatttcatac	420
tgtgaccttt	tccctctgct	aaaactctcc	tgcactgaca	ctcacgtctt	tggactcttt	480
gttgccgcca	acagtgggct	gatgtgtatg	ctcatttttt	ctattcttat	tacctcttac	540
gtcctaatac	tctgctcaca	gcggaaggct	ctctctacct	gcgccttcca	tatcactgta	600
gtcgtcctat	tctttgttcc	ctgtatattg	gtgtaccttc	gacctatgat	caccttccct	660
attgataaag	ctgtgtctgt	gttttatact	gtggtaacac	ccatgttaaa	ccctttaatc	720
tacaccctca	gaaacacaga	ggtgaaaaat	gccatgaagc	agctctggag	ccaaaataatc	780
tggggtaaca	at					792

<210> 182

<211> 936
 <212> DNA
 <213> Unknown (H38g30 nucleotide)

<220>
 <223> Synthetic construct

<400> 182

atgtggccca	atattactgc	agcccccttt	ttgctgactg	gttttccagg	gctggaggca	60
gctcatcact	ggatctccat	ccccttcttt	gctgtttatg	tggtgcatcct	tctgggcaat	120
ggcatgctcc	tctacctcat	caagcatgac	cacagtcttc	atgagcccat	gtactacttc	180
ctcaccatgc	tggcaggcac	agacctcatg	gtgacattga	ccacgatgcc	tactgtaatg	240
ggcatcctat	gggtgaatca	cagggagatt	agcagtgtgg	gctgcttccct	acaggcttac	300
tttattcact	ccctttctgt	tgtggaatca	ggttccctcc	tggcaatggc	atatgatcgt	360
ttcattggca	tccgcaatcc	tttgagatat	gcttccattt	tcaccaatac	tagagtcata	420
gcgttaggag	tgggagtgtt	tctaaggggt	tttgtatcca	tcctgcctgt	aattttgcgt	480
cttttttcat	tttcatattg	caaattctcat	gttatcacac	gtgctttctg	cctccaccaa	540
gaaatcatga	gactggcctg	tgttgacata	actttcaata	gactttaccc	tgtaattttg	600
atctctttaa	caatcttcct	agactctctg	atcactctct	tctcctatat	tctaattctt	660
aatactgtca	taggcattgc	ctctggtgaa	gagagagcca	aagccctcaa	tacctgtatc	720
tcccacatta	gttgtgttct	tatcttctat	gttacggtga	tgggtttgac	attcatttac	780
agatttgggg	agaatgtgcc	agaggttgtc	cacattatca	tgagttacat	ctacttcctc	840
tttctcctt	taatgaacc	tgtcatctac	agcatcaaaa	ccaagcaaat	acaatatggc	900
attatccgcc	ttttatctaa	acatagggtt	agtagg			936

<210> 183
 <211> 854
 <212> DNA
 <213> Unknown (H38g31 nucleotide)

<220>
 <223> Synthetic construct

<400> 183

gacacagagc	cacagaatct	cacagctgtc	tcagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcccat	cctcgctggg	ctcttctctg	ccatgtacct	ggtcacgggtg	120
ctgggggaacc	tgtcattat	cctggccatc	ggctctgact	cccacctga	cacccccatg	180
tacttcttcc	tctccaacct	gtccttgect	gacatcggtt	tcacctcggc	cacggtcctcc	240
aagatgattg	aggagatgca	atcgcatagc	agagtcactc	accatgggga	ctgctgacac	300
agatgtcttt	ctttgtcctt	tttgcatgta	aggatgacat	gatcctgact	gtgatggcct	360
atgactgggt	tgtggccatc	tgtcaccccc	tgaactaccc	aggcatcatg	aatcctcacc	420
tctgtgtctt	attagttttg	gtgccttttt	tccttagcct	gttgattcc	cagctgcaca	480
atttgattgt	gttacaattc	atctgcttca	agaatgtgga	aatctctaata	tttttctgtg	540
acccgtttca	acgtctcaac	cttgctgtt	ctgacagtga	catcaataac	atatacatat	600
atttagatag	tactatattt	ggttttcttc	gcatttcagg	gatccttttg	tgttactata	660
cagttgtctt	ccccattcta	agaattccat	cctcagatgg	gaattataaa	gccttctcca	720
cctgaggctc	tcgcctggca	gttggtttgct	tattttatgg	aacaggcatt	ggcgtgtacc	780
tgacttccgc	tgtgtcatca	tccccagga	atgatgtggt	ggcgtcagta	atgtacgctg	840
tggtggtcac	cccc					854

<210> 184
 <211> 951
 <212> DNA
 <213> Unknown (H38g32 nucleotide)

<220>
 <223> Synthetic construct

<400> 184

atgggtgaga	taaaccagac	acttggtgtca	gaatttcttc	ttctgggtct	ttctggatac	60
ccaaagattg	agattgttta	ctttgctctc	attctagtta	tgtacctagt	gattctaatt	120

ggcaatggtg	ttctaatacat	agccagcatc	tttgattctc	atcttcacac	accaatgtac	180
ttcttctg	gcaacctctc	tttctggat	atctgctata	catcctcctc	tggtccctca	240
acattggtga	gcttaatactc	aaagaaaaga	aacatttctt	tctctggatg	tgcatgagc	300
atgttctttg	ggtttgcaat	ggggtcaaca	gaatgtctgc	ttcttggcat	gatggcattt	360
gatcggtatg	tggccatctg	caacccactg	agatacccca	tcatcctgag	caaggtggcg	420
tatgtattga	tggcttctgt	gtcctggctg	tccggtggaa	taaattcagc	tggtgcaaca	480
ttacttgcca	tgagactgcc	tttctgtggg	aataatatta	tcaatcattt	cgcatgtgaa	540
atattagctg	tcctcaagct	ggcctgtgct	gatatatccc	tcaatattat	caccatgggtg	600
atatcaaata	tggccttccct	ggttcttcca	ctgatgggtca	tttttttctc	ctatatgttc	660
atcctctaca	ccatcttgca	aatgaattca	gccacaggaa	gacgcaaggc	attttccacg	720
tgctcagctc	acctgactgt	ggtagtcata	ttttacggta	ccatcttctt	tatgtatgag	780
aaaccgaagt	ctcaagacct	gattggggaa	gaaaaattgc	aagcattaga	caagctcatt	840
tctctgtttt	atggggtagt	gacacccatg	ctgaatccta	tactctatag	cttgagaaat	900
aaggatgtaa	aagctgctgt	aaaatatttg	ctgaacaaaa	aaccaattca	c	951

<210> 185

<211> 927

<212> DNA

<213> Unknown (H38g33 nucleotide)

<220>

<223> Synthetic construct

<400> 185

atgggtgcca	agaacaatgt	gactgagttt	gttttatttg	gcctttttga	gagcagagag	60
atgcagcata	catgctttgt	ggtattcttc	ctctttcatg	tgctcactgt	cctgggggaa	120
cttctgggtca	tcatacccat	caatgctaga	aagaccctga	agtctcccat	gtatttcttc	180
ctgagccagt	tgtcttttgc	tgacatatgt	tatccatcca	ctaccatacc	caagatgatt	240
gctgacactt	ttgtggagca	taagatcatc	tccttcaatg	gctgcatgac	ccagctcttt	300
tctgcccact	tcttttggtg	cactgagatc	ttcctcetta	cagccatggc	ctatgaccgc	360
tatgtggcca	tctgtaggcc	cctgcactac	acagccatca	tggattgccg	gaagtgtggc	420
ctgctagcgg	gggcctcctg	gttagctggc	ttcctgcatt	ccatcctgca	gacctcctc	480
acggttcagc	tgcttttttg	tgggcccatt	gagatagaca	acttcttctg	tgatgttcat	540
cccctgtcca	agttggcctg	tgcagacacc	tacatggtag	gtctcatcgt	gggtggccaac	600
agcggtagta	tttcttttag	atcctttttt	atccttatca	tttctatgt	tatcatctta	660
ctgaacctaa	gaagccagtc	atctgaggac	cggcgtaagg	ctgtctccac	atgtgggtca	720
cacgtaatca	ctgtcctttt	ggttctcatg	ccccccatgt	tcattgtacat	tcgtccctcc	780
accaccctgg	ctgtgcacaa	acttatcatc	ctctttaaca	ttgtgatgcc	acctttgctg	840
aaccttttga	tctatacact	aaggaacaac	gatgtgaaaa	atgccatgag	gaagctgttt	900
agggatcaaga	ggagcttagg	ggagaag				927

<210> 186

<211> 987

<212> DNA

<213> Unknown (H38g34 nucleotide)

<220>

<223> Synthetic construct

<400> 186

gctacttgcc	acttggtgaac	acacaatgag	gctccttttt	tgctgcctgg	cttttcagta	60
ctggaggcaa	cttatcactc	gatctccatc	cccttctttg	ctgtttatgt	gtgcgtcctt	120
cttggcaatg	gcaagctcct	ctacctcatc	aagcatgacc	acagtcttca	cgaacccatg	180
tactgtttcc	ttgccacact	gaggcaagac	ctcatgggtga	aattgaccat	gatgccact	240
gtaatgggag	tcttgtggat	gaatcacaaa	gagggtatcc	atggggcctg	cttcttgagc	300
gtttacatta	tccactccca	ttatccactt	gcagaatcag	gtattctcct	gtcaatggcc	360
tatgaccgtt	tcattatcat	ccacatgctt	ctcagggtata	actctatttc	tactaaatct	420
tgggtgaaga	tagaactgtg	gctattttat	agggtctttt	tatccctcgt	gcctccaatt	480
ctgccactcc	attgcttccc	atattgtcat	tcccattgtc	tcttccacac	cttttttctc	540
catcaagatg	tcctgaaact	tgctgtgtgt	gatattacat	tcaatcactt	ataccagct	600
attctggttg	ctttgatattt	cttcttagac	gctctgatca	ttgtcttttc	ttatatcctg	660

atccttaaaa	cagttatagg	tattgcctcc	agaaaagagc	aagccaaagc	tctcaacatg	720
tgtgtctccc	atatcagctg	tgtcttggtg	tttcacatca	ccgtgatcag	tgagactttc	780
attcacaggt	ttgggaaaca	tgcaccacat	gtgggtgcaca	ttaccgtgag	ctaagtactc	840
atttcttttt	cctccattca	tgaaccctat	tatatacagc	atcaaaccaa	gcagatccaa	900
agaagcattg	ttcgcttatt	ttctgggcac	agaatggctt	gagccctttt	ttcagaattt	960
tgtgatcttc	atgatttctg	ggccttt				987

<210> 187

<211> 887

<212> DNA

<213> Unknown (H38g35 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(887)

<223> n = A,T,C or G

<400> 187

ctgctgctcc	tgggtgctcct	gctgcccacg	ttcctgctga	gtcttntggg	gaacntgctc	60
atcatctcca	ctgtgctgtc	ctgctcccgc	ctccacaccc	ccatgacttc	ttcttgtgca	120
acctctctat	cctggacatc	ctcttcacct	cagtcacttc	tccaaaagtg	ttggccaact	180
taggatctag	ggataaaaacc	atctcctttg	ccggatgtat	cacccagtgc	tattttctact	240
ttttcttggg	cacagttgag	ttcctcctgc	tgacgggtcat	gtcctatgac	tgctatgccg	300
ccatctgctg	ccccctgcgg	tacaccacca	tcatgagacc	ttatgtctgc	attgggaccg	360
ttgtgtttct	ttgggtggga	ggcttctctg	ctgtgctctt	tccaaccatc	ctcatctccc	420
agctgccctt	ctgtggctcc	aatatcatta	accacttctt	ctgtgacagt	ggacccttgc	480
tggccctggc	ctgtgcagac	accactgcca	tcgagctgat	ggattttatg	ctttcttcca	540
tggctacatc	ctgctgcata	gtcctcgtgg	cctattccta	tacgtacatc	atcttgacca	600
taatgcgcac	tccttctgca	agtgggaagga	agaaggcctt	taataacctgt	gcttcccacc	660
tgaccatagt	catcatttct	agtggcatca	ctgtgtttat	ctatgtgact	cctcccaga	720
aagaatatct	ggagatcaac	aagatccctt	cggttctgag	cagtttggtg	actccattcc	780
tcaaccctt	tatatatact	ctgaggaatg	acacagtgc	gggagtcctc	agggatgtgt	840
gggtcagggt	tcgaggagtt	ttcgaaaaga	ggatgagggc	agtgcctg		887

<210> 188

<211> 930

<212> DNA

<213> Unknown (H38g36 nucleotide)

<220>

<223> Synthetic construct

<400> 188

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gttcactacc	ggatctctat	gtccttcttt	gtcatctact	tctccgtcct	ttttggaaat	120
ggcactcttc	ttgtcctcat	ttggaatgat	cacagcctcc	atgagcccat	gtactacttc	180
ctggctatgc	tggcagacac	ggaccttggg	atgacattca	ctacaatgcc	cacagtccctg	240
ggtgtcctgc	tgctagacca	gagggagatt	gccccatgctg	cctgtttcac	ccaatccttc	300
attcattcac	tggccattgt	agaatcaggt	atcttgcttg	ttttggccta	tgactgtttc	360
attgccatcc	gcacaccact	gaggtacaac	tgcattctta	ccaattcccg	agtgatgaac	420
ataggactgg	gggtactgat	gagagggttt	atgtccattt	tgcccataat	tctttcactc	480
tactgtctacc	catattgtgg	ttcccgtgcc	ctcttgca	cattttgcct	ccatcaagat	540
gtcataaaac	tcgcctgtgc	tgatatcacg	tttaatcaca	tatatccaat	tattcagact	600
tctttgactg	tctttttaga	tgctctaata	atcatctttt	cttatatact	aatccttaag	660
acagtgatgg	gcattgcgtc	tggacaagag	gaagctaaat	ctctcaacac	ttgtgtctcc	720
catattagct	gtgtccctagt	atttcacatc	actgtgatgg	gactgtcatt	cattcacagg	780
tttgggaaac	atgcacctca	tgtggtcccc	attaccatga	gctatgtcca	ttttctcttt	840
cctccattcg	tgaatccctat	catttatagc	atcaagacca	agcagattca	aagaagcatt	900
attcgcctat	tttctgggca	gagtagggct				930

<210> 189
 <211> 996
 <212> DNA
 <213> Unknown (H38g37 nucleotide)

<220>
 <223> Synthetic construct

<400> 189
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 gatccagaac tgcagccggt tctcgttttg ctctccctgt ccctgtccat gtatctgggtc 120
 acgggtgctga ggaacctgct catcatcctg gctgtcagct ctgtctctcc cctccacacc 180
 cccatgtact tcttctcttc caacctgtgc tgggctgaca tcggtttcac ctgggccacg 240
 gttcccaaga tgattgtgga catgcagtcg catagcagag ccattctctca tgcgggctgt 300
 ctgacgcaga tgtcttttct gtcccttttt gcatgtatag aaggcatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctgc actaccagt catcgtgaat 420
 cctcaacttct gtgtcttctt cgttttggtg tcctttttcc ttagcctgtt ggattcccag 480
 ctgcacagtt ggattgtgtt acaattcacc atcttcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaaact gcctgttctg acggcgctcat caatagcata 600
 ttcatatatt ttgatagtag tatgtttggt ttccttccca ttccagggat cctatggtct 660
 tactataaaa tcgtcccttc cattctaagg atttcatcgt cagatgggaa gtataaagcc 720
 ttctccacct gtggctctca ccaggcagtt gtttgctgat tttatagaac aggcattggc 780
 atgtacctga cttcagctgt gtcaccaccc cccaggaatg gtgtgggtggc atcattgata 840
 tacgctgttg tcactcccat gctgaacctt ttcattctaca gcctgagaaa cagggacata 900
 caaagtgcc tgcggaggct gctcagcaga acagtccaat ctcatgatct gttccatcct 960
 ttttcttgggt ggggtgagaaa gggcaaccac attaaa 996

<210> 190
 <211> 930
 <212> DNA
 <213> Unknown (H38g38 nucleotide)

<220>
 <223> Synthetic construct

<400> 190
 atggggagaca atataacatc catcagagag ttcctcctac tgggatttcc cgttggccca 60
 aggattcaga tgetcctctt tgggctcttc tcctgttct acgtcttcac cctgctgggg 120
 aacgggacca tactggggct catctcactg gactccagac tgcacgccc catgtacttc 180
 ttctctctac acctggcggt cgtcgacatc gcctacgcct gcaacacggg gccccggatg 240
 ctggtgaacc tcctgcatcc agccaagccc atctccttgg cgggcccgcg gatgcagacc 300
 tttctgtttt ccacttttgc tgtcacagaa tgtctcctcc tgggtgggtgat gtccatgat 360
 ctgtacgtgg ccattctgcca cccctccga tatttggtcca tcatgacctg gagagtctgc 420
 atcaccctcg cgggtgacttc ctggaccact ggagtccttt tatccttgat tcatcttggtg 480
 ttacttctac ctttaccctt ctgtaggccc cagaaaattt atcactttt ttgtgaaatc 540
 ttggctgttc tcaaacttgc ctgtgcagat acccacatca atgagaacat ggtcttggcc 600
 ggagcaattt ctgggctgggt gggacccttg tccacaattg tagtttcata tatgtgcac 660
 ctctgtgcta tccttcagat ccaatcaagg gaagtcaga ggaaagcctt ccgcacctgc 720
 ttctcccacc tctgtgtgat tggactcgtt tatggcacag ccattatcat gtatgttggg 780
 cccagatatg ggaaccccaa ggagcagaag aaatatctcc tgctgtttca cagcctcttt 840
 aatcccatgc tcaatccctt tatctgtagt cttaggaact cagaagtga gaatactttg 900
 aagagagtgc tgggagtaga aagggttta 930

<210> 191
 <211> 968
 <212> DNA
 <213> Unknown (H38g39 nucleotide)

<220>
 <223> Synthetic construct

<400> 191

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gatccagaac	tgcagcccgt	cctcgctggg	ctgaccctgt	ccatgtacct	ggtcacgggtg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacctccatg	180
tacttcgtcc	tctccaacct	gcgctgggtt	gacatcggtt	tcacctcggc	cacggttccc	240
aagatgattg	tggacatgca	gtcgcatagc	agagtcacct	cttatgcggg	ctgcctgaca	300
cagatgtctt	tcttgggtctt	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatgtcc	360
tatgaccaat	ttttggccat	ctgtcacccc	ctgcactacc	cagtcacgt	gaatcctcac	420
ttctgtgtct	tcttagtttt	gggtgtccttt	ttccttagcc	tggtggattc	ccagctgcat	480
agatggattg	tgttacaatt	caccttcttc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	aacttctcaa	ccttgccctgt	tctgacagcg	tcataaatat	catattcata	600
tatttagata	gtactatgtt	tggttttctt	cccatttcag	ggatcctttt	gtcttactat	660
aaaattgtcc	cctccattct	aaggatgtca	ttgtcagatg	tgaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttttttgc	ttattttacg	gagcaggcat	tggcgtgtac	780
ctgacttcag	ctgtgtcacc	accttcgggc	aatgggtgtg	tggcttcagt	gatgtacact	840
gtggtcaccc	ccatgctgaa	ccctttcatc	tacagcctga	gaaacagggg	cattcaaagt	900
gccccgtgga	ggctgctcag	cacaacagtt	gaatctcatg	atctcttcca	tcctttttct	960
tgtgtctg						968

<210> 192

<211> 960

<212> DNA

<213> Unknown (H38g40 nucleotide)

<220>

<223> Synthetic construct

<400> 192

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gatccagaac	tgcagcccat	cctggctggg	ctgtccctgt	ccatgtatct	ggtcacgggtg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgacc	cccacctcca	cacccccatg	180
tgtttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctggc	cacggttcct	240
aagatgattg	tggacatgca	gtctcatacc	agagtcacct	cttatgaggg	ctgcctgaca	300
cggatatctt	tcttgggtct	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttcccttt	gggtatactt	ttccttagct	tggtggattc	ccagctgcat	480
agttggattg	tgttacaatt	caccatcatc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gacccctctc	aacttctcaa	acttgccctgt	tctgacagcg	tcataaatag	catattcatg	600
tatttccata	gtactatgtt	tggttttctt	cccatttcag	ggatcctttt	gtcttactat	660
aaaatcgtcc	cctccattct	aaggatttca	tcatacagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacttggc	agttgtttgc	tgattttatg	gaacaggcat	tggcgtgtac	780
ctgacttcag	ctgtgtcacc	acccccagg	aatgggtgtg	tagcgtcagt	gatgtacgct	840
gtggtcaccc	ccatgctgaa	ccctttcatc	tacagcctga	gaaacagggg	catataaagt	900
gccttgcgga	ggctgctcag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 193

<211> 980

<212> DNA

<213> Unknown (H38g41 nucleotide)

<220>

<223> Synthetic construct

<400> 193

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gatccagaac	tgcagccggt	cctcgctggg	ctgttctctgt	ccatgtgcct	ggtaagggtg	120
ctggggaacc	tgctcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttgccct	gacatcggtt	tcacctccac	catgggtccc	240
aagatgattg	tggaaatcaa	tctcacagca	gagtcactct	ctatgcaggc	tgccctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggaagagag	acatgctcct	gagtgtgatg	360

gcctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gcttcctagt	tttgcgtgtc	tttttttctt	tctttttctc	agctgcacaa	480
cttgattgcc	ttaaaaatga	cctgcttcaa	gaatgtggga	attcctaatt	tcctctgtga	540
cccttctcaa	ctccccatc	tcacatgttg	tgacaccttc	accaatcaca	taatcatgta	600
tttccccgct	gccatatttg	gttttcttcc	catctcgggg	acccttttct	cttaccatgt	660
aattgtttcc	tccattctga	gggtttcatc	atctgtggga	gggtgaaagc	cttccccatc	720
tgtgagttgt	ttgctgatat	tatggaacag	gctttggagg	gtacctcagt	tcagatgtgt	780
catcttccct	gagaaaggct	gcagtggcct	cagtgatgta	catgggtggc	acacccatgc	840
tgaaccctt	catctacagc	ctgagaaaca	gggatattaa	aagtgtcgtg	cagcgccgcg	900
atggcagcac	ggctctaact	caatatcttc	ttatctgttc	cattcctttt	gtagtgtggg	960
ttaaaaaagg	cagcaaggtc					980

<210> 194

<211> 939

<212> DNA

<213> Unknown (H38g42 nucleotide)

<220>

<223> Synthetic construct

<400> 194

atgggaaact	ggagcactgt	gactgaaatc	accctaattg	ccttcccagc	tctcctggag	60
attcgaatat	ctctcttctg	ggttcttgtg	gtaacttaca	cattaacagc	aacaggaaac	120
atcaccatca	tctccctgat	atggattgat	catcgctgcg	aaactccaat	gtacttcttc	180
ctcagtaatt	tgtcctttct	ggatatctta	tacaccactg	tcattacccc	aaagtgtgtg	240
gcctgcctcc	taggagaaga	gaaaaccata	tcttttgcctg	gttgcatgat	ccaaacatat	300
ttctacttct	ttctggggac	gggtggagttt	atcctcttgg	cggtgatgtc	ctttgaccgc	360
tacatggcta	tctgcgaccc	actgcactac	acggtcatca	tgaacagcag	ggcctgcctt	420
ctgctggttc	tgggatgctg	gggtgggagcc	tctctgtctg	tggtgtttcc	aaccattgta	480
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accatcctgc	gtatccccct	cacccagggc	cgtcagaaag	ctttttctac	ctgtgcttct	720
cacatcactg	ttgtctccat	tgcccacggg	agcaacatct	ttgtgtatgt	gagacccaat	780
cagaactcct	cactggatta	tgacaagggt	gccgctgtcc	tcatcacagt	ggtgacccct	840
ctcctgaacc	cttttatcta	cagcttgagg	aatgagaagg	tacaggaagt	gttgagagag	900
acagtgaaca	gaatcatgac	cttgatacaa	aggaaaact			939

<210> 195

<211> 737

<212> DNA

<213> Unknown (H38g43 nucleotide)

<220>

<223> Synthetic construct

<400> 195

atgggaaata	tcaacataag	tcttgaaaat	tactttattc	tactgggtct	ttctaattga	60
cctcctctgg	aaatagttat	ttttgtagtt	ctcttgatat	tctgcttcat	gacactgata	120
ggcaagctgt	tcagcatcat	tctgtcatac	ctggactccc	atccccacac	tctcggtact	180
tattctcttt	tctggatttc	tgctacacca	tcagttccat	cttttaatta	cagtacaatc	240
tctggggccc	acagaagaac	atctcttatg	ccagtgggtat	gattcaaaat	tattttgttc	300
tcacactggg	aaccatggat	tgcgctctac	tggtgggtgat	gtccaggact	gtgatgcagc	360
tggacacaga	cacttgcctt	-atactgttgt	tatggctgtg	gctttttggg	taagtagctt	420
taccaactca	gcatttgatt	ccttttttac	cttctgggta	accctgtgtg	gacatcacta	480
ttatgcttac	atctttatat	ttacatcatt	gttagtataa	agatggttca	ttaacagaaa	540
gaaacagtct	gtgttctcac	tgaatcatgc	agctttatta	acattatctt	ttccattata	600
aatgactgc	ttccaggaga	ttgaaaagaa	catgttaaga	aaagcacagc	attggagaat	660
ctgaaagcat	gtgatcttgt	tcaattaaac	caagtatcaa	aaacatgcat	ttttatgaga	720
ctatttttagg	aaattca					737

<210> 196
 <211> 949
 <212> DNA
 <213> Unknown (H38g44 nucleotide)

<220>
 <223> Synthetic construct

<400> 196
 gacatccaaa atcagaccac agtgactgag tttaccctga cggcctttcc ggttcttcag 60
 cagcttcaaa tttccctttt ggcagtcctc tggtttactt atatgcttac tctaacagga 120
 aacgttgcca tcatttccct aacatgtgcg aatcatcgcc tccaaacccc aatgtacttc 180
 ttccctcagta attggtcaat ttgggacatt tttttcacca cctcagttat cccaaagcta 240
 ttagcctgtc tcctgcagga caagaagacc atatctttgg ctgggtgcat caccctaaact 300
 tatttccttg gttttctggg ggacagtggg gtttatcctc tgggcagtga tgcctttga 360
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 cctcctacta gttctgggct gctgggttgg agccttcctg tctgtgttgt gcccaacct 480
 tgtggtgtcc agattgcctt tctgttacaa ggaaattagt cacttcttct gtgacatcac 540
 ccctctgcta catgtgtcct gtatagacac tcatttcatc gagatgataa acttcctctt 600
 atcttccctc atcctcctga cctcactggt gctcaccact gtgtcctaca tctacatcat 660
 ttctaccatc ctgcacatcc cctcagccca aggacgtcgg aaggcctttt ccacgtgcgc 720
 ttcccacatc accgtcattt ccatcgctta tataagcaac atcttcaggt atgtgaggcc 780
 cagccagagt cattcaatgg gttttgacaa ggtgacagct gtccccacaa tggtgacccc 840
 tcttctgaat cccttcactt atagtctaag aaatgaaaag gttaaaggcag tcttgaaaga 900
 agcagtcagc aaaattatgt cctcatggca caggagaact taaaacttt 949

<210> 197
 <211> 930
 <212> DNA
 <213> Unknown (H38g45 nucleotide)

<220>
 <223> Synthetic construct

<400> 197
 atggaaccac agaaccacc acaggtatca atgtttgtcc tcttaggggtt ttcacagacc 60
 caagagctcc agaaattcct gttccttctg ttctgttag tctatgttac caccattgtg 120
 ggaaacctcc ttatcatggt cacagtgact ttgactgcc ggctccacac acccatgtat 180
 tttctgctcc gaaatctagc tctcatagac ctctgctatt ccacagtcac ctctccaaag 240
 atgctggtgg acttcctcca tgagaccaag acgatctcct accagggtcg catggcccag 300
 atcttcttct tccacctttt gggagggtggg actgtctttt ttctctcagt catggcctat 360
 gaccgctaca tagccatctc ccagcccctc cggtagtga ccatcatgaa cactcaattg 420
 tgtgtggggc tggtagtagc cgctgggtg gggggctttg tccactccat tgtccaactg 480
 gctctgatac ttccactgcc cttctgtgac cccaatatca tagataactt ctactgtgat 540
 gttccccaag tactgagact tgctgcact gatacctccc tcttgagtt cctcatgatc 600
 ttcaacagtg ggctgctagt tatcatctgg ttctcctccc ttctgatctc ttatactgtc 660
 atcctggtga tgctgaggtc ccactcggga aaggcaagga ggaaggcagc ttccacctgc 720
 accaccaca tcatcgtggt gtccatgate ttcatctcct gtatctatat ctatacctgg 780
 ccttccacc cattcctcat ggacaaggct gtgtccatca gctacacagt catgaccccc 840
 atgtccaacc ccatgatcta caccctgaga aaccaggaca tgaaagcagc catgaggaga 900
 ttaggcaagt gcctagtaat ttgcagggag 930

<210> 198
 <211> 932
 <212> DNA
 <213> Unknown (H38g46 nucleotide)

<220>
 <223> Synthetic construct

<400> 198

gaccaagaaa	atcagacttc	tgaagtcacc	ttcatacctct	tgggcttctc	agaatatcca	60
gaccttcaga	cgccccgtgt	cctgggtgttc	ctgaccatct	acacagtcac	tgtgctgggg	120
aatctgggca	tgatcatagt	catcaggatc	agccccaac	tccacacccc	catgtgcttt	180
ttcctcagcc	acttgctcct	tgttgatttc	tgttattcca	ccacaattac	acccaaactg	240
ctggagaact	tgggtgtgga	agatagaact	atctccttca	caggatgcac	catgcagtta	300
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cgatatgtgg	cgggtgtgtaa	ccctcttctc	tacacagttg	caatgtacca	gaggctttgc	420
tccttgttag	tggctacatc	atactgttgg	gggatagtct	gttccctgac	acttacctag	480
tttctactgg	aattatcctt	cagaggaaat	aatatcatta	ataactttgt	ctgtgagcac	540
gctgccattg	ttgctgtgtc	ttgctctgac	ccctgtgtga	gccaggagat	cactttagtt	600
tctgccacat	tcaatgaaat	aagcagcctg	cttcctatgc	tttcattttt	atcactgtca	660
tgaagacgcc	ttccactggg	gggcgcaaga	aagcgttctc	cacgtctgcc	tcccacttga	720
cggccattac	cattttccat	gggactatcc	ttttcctcta	ctgtgttctc	aactccaaaa	780
gttcgtggct	catggccaag	gtggcctctg	tcttttacac	agtggtcatt	cccatgctga	840
accccttgat	ctatagcctc	aggaacaaag	atgtaaaaga	gacagttagg	aggttactca	900
ttaccaaatt	attatgtctc	atattataaa	at			932

<210> 199

<211> 1000

<212> DNA

<213> Unknown (H38g47 nucleotide)

<220>

<223> Synthetic construct

<400> 199

tatgcagacc	cacagaatct	aacagatgtc	tctatatctc	tctccttaga	agtctcaggg	60
gatccagaac	tgcagccagt	ccttgctggg	ctgttctgt	ccatgtgcct	ggtcacgggtg	120
ctgggggaacc	tgctcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tactttcttc	tctccaacct	gtccttgctc	gacatcggtt	tcacctccac	cacgggtcccc	240
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cagatgtctc	tctttgccat	ttttggaggc	atggaagaga	gacatgctcc	tgagtgtgat	360
ggcctatgac	tggttttag	ccatctgtca	cccgtatat	cattcaccat	catgaacccg	420
tgttttctgtg	cctttctagt	tttgttgtct	ttttttttct	cagtctttta	gactcccagc	480
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tcattgtattt	ccttgctgac	atatttgggt	ttcttcccat	cttggggacc	cttttctctt	660
tctctaaaaat	tttttctctc	attctgaggg	ttcttctatc	agggtgggaag	tataaagccc	720
tctccacctg	tgggtctcgc	ctgtcagttg	tttgctgagt	ttatggaaca	ggcgttggag	780
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acacactgggt	cacccccatg	ctgacccccct	tcattctacag	cctgagaaac	agggatatga	900
aaggtgtcct	gcggcagccg	cacggcagca	cagtctaate	tcaatatctt	atctgttcca	960
ttcctttgtg	gtgtgggttc	aaaaaggcag	caagggtcaaa			1000

<210> 200

<211> 921

<212> DNA

<213> Unknown (H38g48 nucleotide)

<220>

<223> Synthetic construct

<400> 200

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cgggagctcc	agcgtttcct	gtttctaatg	ttcctgtttg	tctacatcac	cactgttatg	120
ggaaacatcc	ttatcatcat	cacagtgcac	tctgattccc	agctccacac	acccatgtac	180
tttctgctcc	gaaacctggc	tgctctagac	ctctgtttct	cttcagtcac	tgctcccaaa	240
atgctagtgg	acctcctctc	tgagaagaaa	accatctctt	accagggctg	catgggtcag	300
atcttcttct	tccacttttt	gggaggtgcc	atggctctct	tctctcag	gatggccttt	360
gaccgcctca	ttgccatctc	ccggccccctc	cgtcatgtca	ccgtcatgaa	cactcagctc	420
tgggtggggc	tggtggtagc	cacctgggtg	ggaggctttg	tccactctat	tgtccagctg	480

gctctgatgc	tcccactgcc	cttctgtggc	cccaacattt	tggataactt	ctactgtgat	540
gttccccaag	tactgagact	tgectgcact	gacacctcac	tgctggagtt	cctcaagatc	600
tccaacagtg	ggctgctgga	tgctgtctgg	ttcttctctc	tcctgatgtc	ctactttattc	660
atcctggtga	tgctgaggtc	acatccaggg	gaggcaagaa	ggaaggcagc	ttccacctgc	720
accaccacaca	tcatcgtggt	ttccatgatc	ttcgttccaa	gcatttacct	ctatgcccg	780
cccttcactc	cattccctat	ggacaagctt	gtgtccatcg	gccacacagt	catgaccccc	840
atgctcaacc	ccatgatcta	taccctgagg	aaccaggaca	tgagggcagc	agtgagaaga	900
ttagggagac	accggctggt	t				921

<210> 201

<211> 947

<212> DNA

<213> Unknown (H38g49 nucleotide)

<220>

<223> Synthetic construct

<400> 201

cacacagagc	cacagaatct	cacagatgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctctccctgt	ccctgtccat	gtatctggtc	120
atggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgtctctcc	cctccacacc	180
cccacctgtg	ctgggctgac	atcggtttca	ccttggccac	ggttcccaag	atgattgtgg	240
acatgcagtc	gcatagcaga	gtcatctctc	atgcgggctg	tctgacgcag	atgtctttct	300
tcctcctttt	tgcatgtata	gaaggcatgc	tcctgactgt	gatggcctat	gactgctttg	360
tagccatctg	tcgccctctg	cactaccag	tcctcgtgaa	tcctcacctc	tgtgtcttct	420
tcgttttggg	gtcctttttc	cttagcctgt	tggattccca	gctgcacagt	tgaattgtgt	480
tacaattcac	catcatcaag	aatgtggaaa	tctctcattt	tttctgtgac	ccctctcaac	540
ttctcaaact	tgctgtttct	gacagcgtca	tcaatagcat	attcatatat	ttcgatagta	600
ctatgttttg	ttttcttccc	atttcagggg	tcctatggtc	ttactataaa	atcatccccct	660
ccattctaag	gatttcatca	tcatatggga	agtataaagc	cttctccaca	tgtgcctctc	720
acctagcagt	tgtttgctga	ttttatgtaa	caggcattgg	catgtacctg	acttcagctg	780
tgtcaccacc	ccccagcaat	ggtgtagtgg	cgtcagtgat	gtatgctgcg	gtcactccca	840
tgctgaaccc	tttcatctac	agcctgagaa	acagggacat	acaaagtgcc	ctgcggaggg	900
tgctcagcag	aacagtcgaa	tttcatgatc	tgttccatcc	tttttct		947

<210> 202

<211> 369

<212> DNA

<213> Unknown (H38g50 nucleotide)

<220>

<223> Synthetic construct

<400> 202

atgtctggct	ccccactca	actgacagca	ggccccagga	cagccagtgg	ctgtgtcatc	60
atgatctgct	ttgccctcac	tgctctctct	tacatccgca	tcttggccac	agtggttcag	120
atccgttcag	cagccagccg	ccggaaggcc	ttctccacct	gttcttccca	cctgggcatg	180
gtgctcctgt	tctatggcac	cggcagctcc	acctacatgc	gaccaccac	ccgtactcc	240
ccgttggaag	ggcgttggc	tgctgtcttc	tactccatcc	tcataccac	cctgaatccg	300
ctcatctaca	gcctgaggaa	ccaggacatg	aagagagccc	tgtggaagct	ctatctccag	360
gtgccatac						369

<210> 203

<211> 1068

<212> DNA

<213> Unknown (H38g51 nucleotide)

<220>

<223> Synthetic construct

<400> 203

atgatcaatg	atagccactt	cagtgggttt	atactccttg	gattcacagg	gcagcctcag	60
cttcagatga	tgatctctgg	ggttgtcttt	ttcttctaca	ctattgcctt	catgggaaat	120
atggccatca	tcctattgtc	tttcttagat	gaccatctcc	aagtcccat	gtacttcttc	180
cttagaaatt	tggccatctt	ggatctctgt	tataccacaa	atatagtccc	acaaatgttg	240
gtcagtattct	ggggcaaaga	caaaagaatt	acctttggtg	ggtgtgcctt	tcaacttttc	300
attgatgtgg	cactgtactc	agttgaatgc	atccttctgt	ccatgatgtc	atatgatcga	360
ctcaatgcta	tctgcaagcc	tctgcatcat	atgaccataa	tgaacctcca	actctgccag	420
ggccttgtgg	tcatctcctg	ggtagtgggt	gtgattaatt	gcatcatacc	ttcccccttat	480
gccacgagtc	ttcctcgatg	taggaaccac	cacctagacc	acttttttgt	gtgtgtgaaa	540
tgtctgcaat	gatcaagatt	caagattgca	tgtgtggaca	ccacagccat	ggaggtaacc	600
acatttgcca	tgtgcctgat	tatagttctt	gttctctctc	ttcttattct	tgtgtcatat	660
ggtttcattg	ctgtggctgt	actcaagatc	aagtctgcag	caggaagaca	aaaagcattt	720
gggacctgtt	cctcccatct	cgttgtggta	tccatcttct	gtgggacagt	tacatacatg	780
tatatacagc	caggaaacag	tccaaatcag	aatgagggca	aacttctcag	tatatatttac	840
tccattgtta	ctcccagctt	gaaccatata	atttatacgg	taagggaataa	ggagttcaag	900
ggggccatga	agaggctaac	tggaaaagaa	aaagattgca	tggaaaaaag	aggacattga	960
ttcttctctc	cagcaatttc	taatatggca	attgatcttc	ccaatctaaa	atgtagacaa	1020
tttattttgt	aaataaattg	tctacacctg	agataaagat	aatatcca		1068

<210> 204

<211> 949

<212> DNA

<213> Unknown (H38g52 nucleotide)

<220>

<223> Synthetic construct

<400> 204

atgatcaatg	atagttactt	tggttggtct	atgctccttg	ggttccctgg	gaagcctcag	60
ctggagatga	tcatctctgg	ggttgtcttt	ttcttctatg	caatttcttt	gatgggaaat	120
atggctcctta	tcctgctgcc	attactggat	aaacatctcc	aaaccccat	atatttcttt	180
cttagaaatc	tggctatctt	ggatctttgt	tacaccacaa	atatagtccc	acagatgttg	240
gtcaatgcct	ggggtaaaga	caagaaaatc	acttttggtg	gctgtgcttt	tcaacttttc	300
actaatgtga	cgtatgcac	ggttgaatgt	atgcttctgg	ctgtgatgtc	atatgaccca	360
ttcaatgctg	tctgcaagcc	tctggactat	atgaccataa	tgaaccccca	actctgtcaa	420
ggcctgggtg	ccatgacctg	gttaattgggt	gtcactaatt	gcatgatact	ttccccctgt	480
cctgtgagtc	ttcctcgatg	cggagaccac	cacctggatc	actatttttg	tgaatatatct	540
gcaatgggtca	aaattgcatg	tggggctacc	acagtcatgg	aggaaaaacc	ttatttgcatt	600
tgtgttggtg	ttgttggttt	cattttctct	gcactcattc	ttctcattct	tgtgtcatat	660
ggcttcattg	ctgtggctgt	actcaagatc	aagtctgcag	caggaagaca	aaaagcattt	720
gggacctgtt	tctcccatct	cattgtggta	tccatcttct	atgggactgt	tagatatatg	780
tatatagagc	caggaaacag	tccatctcag	gatgagggca	aacttctcca	tatatatttac	840
tccattgtta	ctcccacctt	gaaccatccc	cactaaggaa	taaggagttc	aagtgggcca	900
tgaaaaggct	tattggaaaa	gaaaaagggt	ctggagacac	aatagggtca		949

<210> 205

<211> 936

<212> DNA

<213> Unknown (H38g53 nucleotide)

<220>

<223> Synthetic construct

<400> 205

atgggttaacc	aaagctccac	accgggcttc	ctccttcttg	gcttctctga	acaccagggg	60
ctggaaagga	ctctcttcgt	ggttgtcttc	acttcttacc	tcctaacctt	agtgggcaac	120
acactcatca	tcctgctgtc	tgcgctggac	cccaagctcc	actctccaat	gtactttttc	180
ctctccaacc	tctccttctt	ggacctctgt	ttcaccacga	gttgtgttcc	ccaaatgctg	240
gtcaacctct	ggggcccaaa	gaagaccatc	agcttctctg	actgctctgt	ccagatcttc	300
atcttctctg	ccctggggac	aactgagtgc	atcctcttga	cagtgatggc	ttttgatcgc	360
tacgtggctg	tctgccagcc	cctccactat	gccaccatca	tccacccccg	cctgtgctgg	420

cagctggcat	ctgtggcctg	ggtcattggg	ctagtggagt	cagtgggtcca	gacaccatcc	480
accctgcacc	tgcccttctg	ccccgatcgg	caggtggatg	atcttgtctg	tgagggtccca	540
gctctaattc	gactctcctg	tgaagacacc	tcctacaatg	agatccaggt	ggctgttgcc	600
agtgtcttca	tcttggttgt	gcctctcagc	ctcatccttg	tctcttacgg	agccattacc	660
tgggcagtgc	tgaggattaa	ctctgcaaaa	gggcggagga	aagcttttgg	gacctgtctc	720
tcccatctca	ctgtggtcac	cctcttctac	agctcagtca	ttgctgtcta	cctccagccc	780
aaaaatccct	atgcccaga	gaggggcaag	ttctttggtc	tcttctatgc	agtgggcact	840
ccttcactta	accctctcat	atacaccctg	aggaacaagg	aggtaaccag	ggcattcagg	900
agattgctgg	ggaaggaaat	ggggctcaca	caaagc			936

<210> 206

<211> 1030

<212> DNA

<213> Unknown (H38g54 nucleotide)

<220>

<223> Synthetic construct

<400> 206

atgggttaacc	aaagctccgc	accaggcttt	ctccttcttg	gcttctctga	acaccagca	60
ctggaaagga	ctctctttgt	agttgtcttc	acttctacc	tcctaacc	ggtggactca	120
tcatcctgct	gtctgtgctg	gacccagggc	tccactctcc	aatgtacttt	ttcctctcca	180
acctctcctt	cttggaacctc	tgtttcacca	taagttgtgt	ccccgggatg	ctgggtcaacc	240
tctgggagcc	aaagaagacc	atcatcttac	tgggctgctc	tgtccagttc	ttcatcttcc	300
tgtccctggg	gaccactgag	tgcatcctcc	tgacgggtgat	ggcctttgac	cgctacatgg	360
ctatcttcaa	gcccctgcgc	catgccacca	tcgtccacct	ctgcctgtgc	tggcagctgg	420
catctgtggc	ctgggtcatt	gggctggtag	agtcagtggg	ccagacacca	tccaccctgc	480
gctgcctttt	ctgcccccat	cagcaggtgg	atgattttgt	ctgtgaggtc	ccagctctaa	540
ttcgactctc	ctgtgaagac	acctcctaca	atgagatcca	gatggctggt	gccagtgtct	600
tcatcttgge	tgtgcctcag	cctcatcctt	gtctcttatg	gagccattgc	ctgggcagtg	660
ctaaggacta	actgcaaaag	ggcagaggaa	agcttttggg	acctgtcctc	cccactctac	720
tgtgggtcacc	ctcttctaca	gtcagtcac	tgctgtctac	ctccagccca	aaaatcccta	780
tgcccaagag	aggggcaagt	tctttggtct	cttctatgca	gtgggcactc	cttactttaa	840
ccctctcata	tacaccctga	ggaacaagga	ggtaaccagg	gcattcagga	gattgctggc	900
gaaggaaatg	gggctcatat	aaagttgagg	gagagctggt	taatgtgctt	tctaaattaa	960
gaagaaatta	tttatccttt	tgtgaacaag	tttgagctcc	caagtatact	acctttcata	1020
cacccatcac						1030

<210> 207

<211> 873

<212> DNA

<213> Unknown (H38g55 nucleotide)

<220>

<223> Synthetic construct

<400> 207

atgttcgccg	cccttgctct	cctgtgctac	ctcctgacct	tgacgggcaa	ctcggcgctg	60
gtgctgctgg	cgggtgcgca	cccgcgctg	cacacgcca	tgtactactt	cctctgccac	120
ctggccttgg	tagacgcggg	cttcaactact	agcgtgggtg	cgccgctgct	ggccaacctg	180
cgcggaaccg	cgctctggtt	gcccgcgagc	cactgcacgg	cccagctgtg	cgcatcgctg	240
gctctgggtt	cggccgaatg	cgtcctcctg	gcggtgatgg	ctctggaccg	cgcggccaa	300
aaagtgaagg	gggcagcgag	gaggctgctg	cggagtctgg	ggagaggcca	ggctgggcag	360
agcgccctct	ggctaagcgg	cctcaccaac	tcggttgccg	aaaccgcgct	cctggctgag	420
cggccgctgt	gcgcgccccg	cctgctggac	cacttcatct	gtgagctgcc	ggcggttgctc	480
aagctggcct	gcgaggcgga	cggagacact	accgagaacc	agatgttcgc	cgcccgctg	540
gtcatcctgc	tgtctgccgtt	tgccgtcatc	ctggcctcct	acggtgccgt	ggcccagact	600
gtctgttgca	tgcggttcag	cggaggccgg	aggagggcgg	tgggcacgtg	tgggtccac	660
ctgacagccg	tctgcctggt	ctacggctcg	gccatctaca	cctacctgca	gcccgcgag	720
cgctacaacc	aggcagggg	caagttcgta	tcgctcttct	acaccgtggg	cacacctgct	780
ctcaaccgcg	tcactctacac	cctcaggaat	aagaaagtga	agggggcagc	gaggaggctg	840

ctgcggagtc tggggagagg ccaggctggg cag

873

<210> 208

<211> 921

<212> DNA

<213> Unknown (H38g56 nucleotide)

<220>

<223> Synthetic construct

<400> 208

gagctgatta	cgaattcgag	ctcgggtaccc	tcttgtgagc	ggacaattca	gatcttctctc	60
ttctcactca	taactacaat	atatgcactg	actataacag	gtaatggagc	cattgctttt	120
gccctgtggg	gtgaccggcg	acttcacact	cccatgtaca	tgttcctggg	agatttctcc	180
tttttagaga	tatggtatgt	cttttctaca	gttcccaaga	tggtgggtcaa	cttcctttca	240
gagaaaacaa	acatctcctt	tgctggattg	ctttctccag	atctatttct	tcttctcttt	300
gatacatcag	aatgcttgct	tttgactgtg	atggcctttg	atcagaacct	tgctatctgc	360
cggcccttgc	actatcctaa	tatcatgact	gggcactctc	gtgccaaact	ggccatactg	420
tgctgggttt	gtggctttct	gtgggtcctg	atccccattt	tctcatctct	cagatgcctt	480
tctgtggccc	aaacattatt	gaccatgttg	tgtgtgaccc	agggccacta	tttgcatggg	540
attgtgtttc	tgccccaaga	atccaactgt	tttgctacac	tctaagctca	ttagttattt	600
ttggtaactt	cctctttatt	attggatcct	atactattgt	cctgaaagtt	gtgttgggta	660
cgccttcaag	cactgggaga	cataaggcct	tctctacctg	tgggtctcat	ttggctgtgg	720
tatcactgtg	ctatggctct	cttatgggtc	tgtatgtgag	cccaggactc	ggacattcta	780
cggagatgca	gaaaattgta	actttgttct	atgctatggt	gacctcactc	ttcaatcccc	840
ttatctatag	gcctccagaa	taaggagata	aaggcagcct	tgaggaaagt	tctggtgagt	900
tccaacataa	tctaaggcat	a				921

<210> 209

<211> 660

<212> DNA

<213> Unknown (H38g57 nucleotide)

<220>

<223> Synthetic construct

<400> 209

gcatgtaagc	atgcatgata	ctgactgtga	tggcctatga	ctgcttagta	gccatctgtc	60
gccctctgca	ttaccagtc	atcgtgaatc	ctcacctctg	tgtcttcttc	gttttgggtg	120
ccttctcatt	agcatgtagg	ttcccagctg	cacagttgaa	ttgtgttaca	attcaccatc	180
atcaagaatg	tggaatctc	taattttgtc	tgtgaccctc	ctcaatttct	caaacttgcc	240
tgttctgaca	gcgtcatcaa	tagcatattc	acgtatttcc	atagtactat	gtttgggttt	300
cttcccattt	cagggatcct	tttgtcttac	tttaaaatcg	tcaccttcat	tctctggatt	360
tcactcttcag	atgggaagta	taaagccttc	tccacctgtg	actctcacct	agcagttgtt	420
tgtctgattt	atggaacagg	cattggcgtg	tacttgactt	cagctctgtc	accaccccc	480
aggaatgggtg	tgatggcgtc	agtgatgtac	gctgtgggtc	cccccatgct	gaaccttttc	540
atctacagcc	tgagaaacag	ggacatacaa	agtgcctgtg	ggaggctgct	cagcagaaca	600
gtcgaatctc	atgatctgtt	ccatcctttt	tcttgtgtgg	gtaagggcaa	ccacattaaa	660

<210> 210

<211> 942

<212> DNA

<213> Unknown (H38g58 nucleotide)

<220>

<223> Synthetic construct

<400> 210

atggccaaga	ataatctcac	cagagtaacc	gaattcatte	tcattgggctt	tatggaccac	60
cccaaattgg	agattccccct	ctttctgggtg	tttctgagtt	tctacctagt	caccttcttt	120
gggaatgtgg	ggatgattat	gttaatccaa	gtagatgtca	aactctacac	cccaatgtac	180

ttcttctga	gccacctctc	cctgctggat	gcctgttaca	cctcagtcac	cacccctcag	240
atcctagcca	cattggccac	aggcaaaacg	gtcatctcct	acggccactg	tgctgcccag	300
ttctttttat	tcacccatctg	tgcaggcaca	gagtgtcttc	tgctggcagt	gatggcctat	360
gatcgctatg	ctgccattcg	caacccactg	ctctataccg	tgcccatgaa	tcccaggctc	420
tgctggagcc	tggtggtagg	agcctatgtc	tgtgggggtg	caggagccat	cctgcgtacc	480
acttgcacct	tcacccctctc	cttctgtaag	gacaatcaaa	taaacttctt	cttctgtgac	540
ctccaccccc	tgctgaagct	tgccctgcagt	gacacagcaa	acatcgagat	tgatcatc	600
ttctttggca	atcttgtgat	tttggccaat	gcctccgtca	tcctgatttc	ctatctgtctc	660
atcatcaaga	ccattttgaa	agtgaagtct	tcagggtggca	gggccaagac	tttctccaca	720
tgtgcctctc	acatcactgc	tgtggccctt	ttctttggag	cccttatctt	catgtatctg	780
caaagtggct	caggcaaata	tctggaggaa	gacaaagtcg	tgtctgtctt	ctatacagtg	840
gtcatcccca	tgctgaaccc	tctgatctac	agcttaagaa	acaaagatgt	aaaagacgcc	900
ttcagaaagg	tcgctaggag	actccagggt	tccttgagca	tg		942

<210> 211

<211> 941

<212> DNA

<213> Unknown (H38g59 nucleotide)

<220>

<223> Synthetic construct

<400> 211

atgggtgggc	taaaaagaga	caatgcctct	gagatgactg	aactcatcct	tggtggattt	60
gcccaacacc	ctgaaatcca	gactgccttc	ttcttggaac	tactgttttt	ctactagtca	120
cagcgtttga	gaacatcctt	atcggttgctg	tagtgagatg	agattctcga	cttcatactc	180
ctatgggatt	tttttttctt	cagtacctta	tcctcccttg	aaatgtgtta	ctccatcagc	240
tgggagctat	aagtcttggc	tcaatgcac	aaggacttcc	ccaccatctc	ctataacagc	300
tgttctgttc	agatgatcac	acacctcttt	ctggggatga	cagtgtctcc	tccttgctgg	360
catggccttac	aacagggttg	ttgaaatctc	ttatctcctc	cattacacta	ttattatgag	420
caatcgggtc	tgtatacagt	tggccttggg	aatctggacc	catgccttct	tagtagcagt	480
cacactaatc	attgcaattc	ctgctagtta	ttatggacac	aatgtcatca	accattttac	540
cttgagatcc	aggccctgct	gaagctcgct	tgctcagaca	cccttgctcag	cctgattcag	600
ggtctgggta	tcagtgtgtt	cacactgccc	ctgcccttca	cattcatcct	catctcctaa	660
ttttgcattt	ttgttctgct	gtggaggcta	ggcgtgaagc	tttctccacc	tggtgatctc	720
atctgactgg	agtcaccata	ttttatgggg	cagccatctg	catgtacttg	aaacctcagt	780
caaaggggaa	ccaggaagag	gataaagttg	tctcaaaact	ttatggagca	gttactccca	840
tgtaaatcc	cccaatttac	attcagagaa	ataaggatat	aaaagggtgca	cttagaaagt	900
tagccaaagg	aaatgaaaaa	tcctaacagt	tctctttaa	c		941

<210> 212

<211> 1049

<212> DNA

<213> Unknown (H38g61 nucleotide)

<220>

<223> Synthetic construct

<400> 212

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tacaaccatc	caaaatttca	gattgccttt	tatcgcacca	tggtagtggg	ctacctgac	120
acatttggtg	gtagcagctc	cattattggt	gtgggttaaag	ttgatgggtg	gcttcacact	180
cctatgtgtt	ttttcctaag	caacctgtcc	ttccttgata	tctgctactc	cagcaattca	240
gtaccttttt	tgttgttcaa	tggcttaaga	gactacccca	ccatttcccta	taacagctgt	300
tatgcccaga	tgaccagtgc	tttttttctg	gggatgcacg	ggtgtcttct	ccttgctgtc	360
atggccttatg	agagatttgt	tgtgatcttc	aatccccctg	gctacatcat	cattatgaac	420
aataaggtct	gcatacagtt	ggccatgggt	acctgggcca	gtgccttctt	tatgtcatta	480
atacaataat	tgcaataata	cattgcaata	atacattaat	tgcaatgatt	gcattgcaat	540
tcctgcccac	ttttgtggac	acaatgtcat	caaccatttt	acctgtgagg	tgcagggaatt	600
gttgaagctt	gtctgctcag	acatcccagg	cagcctcatc	ctcggtctag	tcacgggcat	660
attcaccttg	tcctgcccct	tcaccttgcc	cctgcccctc	accttcaccc	tcttcgccta	720

tgctcacatt	gtggttgctg	tgctgaggat	caactctgca	gaggccagac	tcaaagcttt	780
ctccacctgt	ggatcccatc	tgactgtgat	catcatat	tatgggacag	ccacctacat	840
gtacttgaaa	cctcagtc	gggaatcca	agatgagggt	aaagtcatt	ctgtattttt	900
tttgaaagta	gagaagcaac	atcaaaatga	tagcatctct	gtattttatg	gtgtgtgtgac	960
ccctatgttg	aacccctca	tttacacctt	gagagacaag	gatgcgaaaa	tgctctaaga	1020
aaaataatta	ggaagaaaga	gtcctaataa				1049

<210> 213

<211> 954

<212> DNA

<213> Unknown (H38g62 nucleotide)

<220>

<223> Synthetic construct

<400> 213

atggacaaga	taaaccagac	atgtgtgaga	gaattcattc	ttctgggact	ctctgggtac	60
cccaaacttg	agatcatttt	ctttgctctg	attctagtta	tgtacgtagt	gattctaatt	120
ggcaatgggtg	ttctgatcat	agcaagcatc	ttggattctc	gtcttcacat	gcccattgtac	180
ttcttcctgg	gcaacctctc	tttcctggat	atctgctata	caacctcctc	cattccctca	240
acactgggtga	gcttaatctc	aaagaaaaga	aacatttcct	tctctggatg	tgcatgtcag	300
atgttctttg	ggtttgcaat	gggggtcaaca	gaatgtttcc	tccttggcat	gatggcattt	360
gatcgttatg	tggccatctg	taacctctct	agatacccca	tcacatgaa	caagggtggg	420
tatgtactgc	tgacttctgt	atcatggctt	tctgggtgaa	tcaattcaac	tgtgcaaca	480
tcacttgcca	tgcatggcc	tttctgtggg	aacaatatta	ttaatcattt	cttatgcgag	540
atcttagctg	tcctaaaatt	agcttgttct	gatatactct	tcaatattgt	taccctagca	600
gtgtcaata	ttgctttcct	agttcttcct	ctgctcgtga	ttttttctc	ctatatgttc	660
atcctctaca	ccatcttgcg	aacgaactcg	gccacaggaa	gacacaaggc	attttctaca	720
tgctcagctc	acctgactgt	ggtgatcata	ttttatggta	ccatcttctt	tatgtatgca	780
aaacctaagt	cccaggacct	ccttgggaaa	gacaacttgc	aagctacaga	ggggcttgtt	840
tccatgtttt	atggggttgt	gaccccatg	ttaaacccca	taatctatag	cttgagaaat	900
aaagatgtaa	aagctgctat	aaaatatttg	ctgagcagga	aagctattaa	ccag	954

<210> 214

<211> 957

<212> DNA

<213> Unknown (H38g63 nucleotide)

<220>

<223> Synthetic construct

<400> 214

atgttcccgg	caaattggac	atctgtaaaa	gtatttttct	tcctgggatt	ttttcactac	60
cccaaagttc	aggatcatcat	atgtgcgggtg	tgcttgctga	tgtacctgat	caccttgctg	120
ggcaacattt	ttctgatctc	catcaccatt	ctagattccc	acctgcacac	ccctatgtac	180
ctcttcctca	gcaatctctc	ctttctggac	atctggtaact	cctcttctgc	cctctctcca	240
atgctggcaa	actttgtttc	agggagaaac	actatttcat	tctcagggtg	cgccactcag	300
atgtacctct	cccttgccat	gggtctccact	gagtggtgtg	tcctgccc	gatggcatat	360
gaccggtatg	tggccatctg	caacccccctg	agataccctg	tcacatgaa	taggagaacc	420
tgtgtgcaga	ttgcagctgg	ctcctggatg	acaggctgtc	tcactgccat	ggtggaaatg	480
atgtctgtgc	tgccactgtc	tctctgtggt	aatagcatca	tcaatcattt	cacttgtgaa	540
attctggcca	tcttgaaatt	ggtttgtgtg	gacacctccc	tggtgcagtt	aatcatgctg	600
gtgatcagtg	tacttcttct	ccccatgcca	atgctactca	tttgatctc	ttatgcattt	660
atcctcgcca	gtatcctgag	aatcagctca	gtggaaggct	gaagtaaagc	cttttcaacg	720
tgcacagccc	acctgatggg	ggtagttttg	ttctatggga	cggtctctc	catgcacctg	780
aagccctccg	ctgtagattc	acaggaaata	gacaaattta	tggctttggg	gtatgccgga	840
caaaccccca	tggtgaatcc	tatcatctat	agtctacgga	acaaagaggt	gaaagtggcc	900
ttgaaaaaat	tgctgattag	aaatcatttt	aatactgcct	tcatttccat	cctcaaa	957

<210> 215

<211> 930

<212> DNA

<213> Unknown (H38g64 nucleotide)

<220>

<223> Synthetic construct

<400> 215

atggcagaga	tgaacctcac	cttggtgacc	gagttcctcc	ttattgcatt	cactgaatat	60
cctgaatggg	cactccctct	cttcctcttg	tttttattta	tgtatctcat	caccgtattg	120
gggaacttag	agatgattat	tctgatectc	atggatcacc	agctccacgc	tccaatgtat	180
ttccttctga	gtcacctcgc	tttcatggac	gtctgctact	catctatcac	tgtccccag	240
atgctggcag	tgctgctgga	gcatggggca	gctttatctt	acacacgctg	tgctgctcag	300
ttctttctgt	tcaccttctt	tggttccatc	gactgctacc	tcttggccct	catggcctat	360
gaccgctact	tggctgtgtg	ccagcccttg	ctttatgtca	ccatcctgac	acagcaggcc	420
cgcttgagtc	ttgtggctgg	ggcttacggt	gctgggtctca	tcagtgcctt	gggtgaggaca	480
gtctcagcct	tcactctctc	cttctgtgga	accagtgaga	ttgactttat	tttctgtgac	540
ctccctcctc	tgttaaagtt	gacctgtggg	gagagctaca	ctcaagaagt	gctgattatt	600
atgtttgcc	tttttgtcat	ccctgcttcc	atgggtgtga	tcttgggtgtc	ctacctgttt	660
atcatcgtgg	ccatcatggg	gatccctgct	ggaagccagg	ccaagacctt	ctccacctgc	720
acctcccacc	tcactgctgt	gtcactcttc	tttggtagcc	tcactctcat	gtacttgaga	780
ggtaactcag	atcagtcttc	ggagaagaat	cgggtagtgt	ctgtgcttta	cacagaggtc	840
atccccatgt	tgaatccctt	catctacagc	ctgaggaaca	aggaagtga	ggaggccctg	900
agaaaaattc	tcaatagagc	caagttgtcc				930

<210> 216

<211> 964

<212> DNA

<213> Unknown (H38g65 nucleotide)

<220>

<223> Synthetic construct

<400> 216

atgggcatgg	agggtcttct	ccagaactcc	actaacttcg	tcctcacagg	cctcatcacc	60
catcctgcct	tccccgggct	tctctttgca	atagtcttct	ccatctttgt	gggtggctata	120
acagccaact	tggtcatgat	tctgtctatc	cacatggact	cccgcctcca	cacacccatg	180
tacttcttgc	tcagccagct	ctccatcatg	gataccatct	acatctgtat	cactgtcccc	240
aagatgctcc	aggacctcct	gtccaaggac	aagaccattt	ccttctctggg	ctgtgcagtt	300
cagatcttcc	tctacctgac	cctgattgga	ggggaattct	tcctgctggg	tctcatggcc	360
tatgaccgct	atgtggctgt	gtgcaaccct	ctacgggtacc	ctctcctcat	gaaccgcagg	420
gttttgett	tcatgggtgt	cggctcctgg	gttgggtggt	ccttgggatgg	gttcatgctg	480
actcctgtca	ctatgagttt	ccccttctgt	agatcccag	agatcaatca	ctttttctgt	540
gagatccag	ccgtgctgaa	gttgtcttgc	acagacacgt	cactctatga	gacctgatg	600
tatgcctgct	gcgtgctgat	cgctgcttat	ccctctatct	gtcatctctg	tctcctacac	660
gcacatcctc	ctgactgtcc	acaggatgaa	ctctgctgag	ggccggcgca	aagcctttgc	720
tacgtgttcc	tcccacatta	tggcggtgag	cgttttctac	ggggcagcct	tctacaccaa	780
cgtgctgccc	cactcctacc	acactccaga	gaaagataaa	gtgggtgtctg	ccttctacac	840
catcctcacc	cccattgctca	acccactcat	ctacagcttg	aggaataaag	atgtggctgc	900
agctctgagg	aaagtactag	ggagatgtgg	ttcctcccag	agcatcaggg	tggcgactgt	960
gatac						964

<210> 217

<211> 933

<212> DNA

<213> Unknown (H38g66 nucleotide)

<220>

<223> Synthetic construct

<400> 217

atggctcaca	caaataaatc	gatgggtgtct	gagtttgtac	ttttgggact	ctctaattcc	60
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tgggggaacttc	aactttttctt	tttcgccatc	ttctctatag	tctatgtgac	atcagtgcta	120
ggcaatgtct	taattattgt	cattatttct	tttgactccc	atttgaactc	tcctatgtac	180
ttcttgtctca	gtaatctttc	tttcattgat	atctgtcagt	ctaactttgc	cacccccaag	240
atgcttgttag	acttttttat	tgagcgcaag	actatctcct	ttgaggggtg	catggcccag	300
atattcgttc	ttcacagttt	tgttgggagt	gagatgatgt	tgcttgtagc	tatggcatat	360
gacagattta	tagccatatg	taagcctctg	cactacagta	caattatgaa	cgggaggctc	420
tgtgtaattt	ttgtgtctat	ttcctgggcy	gtgggcygtc	ttcattctgt	gagccacttg	480
gctttttacag	tggacctgcc	attctgtggt	cccaatgagg	tggatagctt	cttttgtgac	540
cttcccttgg	tगतगगगct	ggcttgcag	gatacatatg	aaatggaaat	tatgacccta	600
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attttgatcg	gtgtccgatg	caggctctcc	agtgggtcat	ctaaggctct	ttctacatta	720
actgcccaca	tcacagtggg	cattcttttc	ttcgggcctt	gcatttattt	ctatatatgg	780
ccttttagca	gacttcctgt	ggacaaattt	ctttctgtgt	tctacactgt	ttgtactccc	840
ttgttgaacc	ccatcatcta	ctctctgagg	aatgaagatg	ttaaagcagc	catgtggaag	900
ctgagaaacc	gtcatgtgaa	ctcctggaaa	aac			933

<210> 218

<211> 936

<212> DNA

<213> Unknown (H38g67 nucleotide)

<220>

<223> Synthetic construct

<400> 218

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cctcagctgg	agctagtcct	ctttgtggtt	cttttgatct	tctatatctt	cactttgctg	120
gggaacaaaa	ccatcattgt	attatctcac	ttggaccac	atcttcacac	tcctatgtat	180
ttttttcttct	ccaacctaa	ctttttggat	ctgtgttaca	caaccggcat	tgttccacag	240
ctcctggtta	atctcagggg	agcagacaaa	tcaatctcct	atgggtggtg	tgtagtccag	300
ctgtacatct	ctctaggctt	gggatctaca	gaatgcgttc	tcttaggagt	gatggatatt	360
gaccgctatg	cagctgtttg	caggcccttc	cactacacag	tagtcatgca	cccttgtctg	420
tatgtgctga	tggcttctac	ttcatgggtc	attgggtttg	ccaactccct	attgcagacg	480
gtgctcatct	tgtttttaac	actttgtgga	agaaataaat	tagaacactt	tctttgtgag	540
gttcctccat	tgtcgaagct	tgctgtgttt	gacactacta	tgaatgaatc	tgaactcttc	600
tttgtcagtg	tcattattct	tcttgtacct	gttgcattaa	tcatattctc	ctatagtcag	660
attgtcaggg	cagtcacag	gataaagtta	gcaacagggc	agagaaaaagt	gtttgggaca	720
tgtggctccc	acctcagagt	ggtttccctg	ttctacggca	cagctatcta	tgcttacctc	780
cagcccgcca	acaactactc	tcaggatcag	ggcaagtcca	tctctctctt	ctacaccatc	840
attacaccca	tgatcaaccc	cctcatatat	acactgagga	acaaggatgt	gaaaggagca	900
cttaagaagg	tgtcttgga	gaactacgac	tccaga			936

<210> 219

<211> 939

<212> DNA

<213> Unknown (H38g68 nucleotide)

<220>

<223> Synthetic construct

<400> 219

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ggactctttg	ctgagagcaa	gcatgctgcc	ctcctctaca	ccgtgacctt	ccttcttttc	120
ttgatggccc	tcactgggaa	tgccctcctc	atcctcctca	tccactcaga	gccccgcctc	180
cacaccccca	tgtacttctt	catcagccag	ctcgcgctca	tggatctcat	gtacctatgc	240
gtgactgtgc	ccaagatgct	tgtggggccag	gtcactggag	atgataccat	ttccccgtca	300
ggctgtggga	tccagatggt	cttccacctg	accctggctg	gagctgaggt	tttctcctg	360
gctgccatgg	cctatgaccg	atatgctgct	gtttgcagac	ctctccatta	cccactgctg	420
atgaaccaga	gggtgtgcca	gctcctgggt	tcagcctgct	gggttttggg	aatggttgat	480
ggtttgttgc	tcaccccat	taccatgagc	ttcccccttt	gccagtctag	gaaaatcctg	540
agttttttct	gtgagactcc	tgccctgctg	aagctctcct	gctctgacgt	ctccctctat	600

aagatgctca	cgtacctgtg	ctgcatectc	atgcttctca	cccccatcat	ggatcatctcc	660
agctcatata	ccctcatect	gcattctcatc	cacaggatga	attctgccgc	cggccgcagg	720
aaggccttgg	ccacctgtc	ctccacatg	atcatagtgc	tgctgctctt	cggtgcttcc	780
ttctacacct	acatgctccc	gagttcctac	cacacagctg	agcaggacat	gatggtgtct	840
gccttttaca	ccatcttcac	tcctgtgctg	aacccctca	tttacagtct	ccgcaacaaa	900
gatgtcacca	gggctatgag	gagcatgatg	cagtcaaga			939

<210> 220

<211> 942

<212> DNA

<213> Unknown (H38g69 nucleotide)

<220>

<223> Synthetic construct

<400> 220

atggatgtgg	gcaataagtc	taccatgtct	gaatttggtt	tgctggggct	ctctaattcc	60
tggaactac	agatgttttt	ctttatgggt	ttttcattgc	tttatgtggc	aacaatgggt	120
ggtaacagcc	tcatagtcat	cacagttata	gtggaccctc	acctacactc	tcctatgtat	180
ttcctgttta	ccaatctttc	aatcattgat	atgtctcttg	cttctttcgc	caccccaaag	240
atgattacag	attacctaac	aggtcacaaa	accatctctt	ttgatggctg	ccttaccag	300
atattctttc	tccacctttt	cactggaact	gagatcatct	tactcatggc	catgtccttt	360
gatagggtata	ttgcaatatg	caagcccctg	cactatgctt	ctgtcattag	ccccagggtg	420
tgtgttgctc	tcgtgggtggc	ttcctggatt	atgggagtta	tgcatccaat	gagtcaggtc	480
atatttgccc	tcacgttacc	attctgtggt	ccctatgagg	tagacagctt	ttctgtgac	540
cttctgtggg	tgttccagtt	ggcttgtgtg	gatacttatg	ttctgggcct	ctttatgac	600
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gtcctgggtta	ctgtgaagca	tcattcttcc	agaggatcat	ctaaggccct	ttctacttgt	720
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ccactaagca	gctttctcac	agacaagatt	ctgtctgtgt	tttataccat	ctttactccc	840
actctgaacc	caataatcta	tactttgagg	aatcaagaag	taaagatagc	catgaggaaa	900
ctgaaaaata	ggttttctaaa	ttttaataag	gcaatgcctt	ca		942

<210> 221

<211> 930

<212> DNA

<213> Unknown (H38g70 nucleotide)

<220>

<223> Synthetic construct

<400> 221

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aggattcaga	tgctcctctt	tgggctcttc	tcctgtttct	acgtcttccac	cctgctgggg	120
aacgggacca	tactggggct	catctcactg	gactccagac	tgacagcccc	catgtacttc	180
ttcctctcac	acctggcggt	cgtegcacatc	gcctacgcct	gcaacacggt	gccccggatg	240
ctgggtgaacc	tcctgcaccc	agccaagccc	atctcctttg	cgggcccgcac	gatgcagacc	300
tttctgtttt	ccacttttgc	tgtcacagaa	tgtctcctcc	tggtgggtgat	gtcctatgat	360
ctgtacgtgg	ccatctgcca	ccccctccga	tatttggtcca	tcatgacctg	gagagtctgc	420
atcacccctcg	cggtgacttc	ctggaccact	ggagtccttt	tatccttgat	tcattcttgtg	480
ttacttctac	ctttaccctt	ctgtaggccc	cagaaaattt	atcacttttt	ttgtgaaatc	540
ttggctgttc	tcaaaacttg	ctgtgcagat	accacatca	atgagaacat	ggctctggcc	600
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ccagatatatg	ggaaccccaa	ggagcagaag	aaatatctcc	tgctgtttca	cagcctcttt	840
aatcccatgc	tcaatccctt	tatctgtagt	cttaggaact	cagaagtga	gaatactttg	900
aagagagtgc	tgggagtaga	aagggtctta				930

<210> 222

<211> 969

<212> DNA

<213> Unknown (H38g71 nucleotide)

<220>

<223> Synthetic construct

<400> 222

cacacggagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgctgccggg	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggc	120
atggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgactcccc	tccacacccc	180
cgtgtacttc	ttcctctcca	acctgtgctg	ggctgacatc	ggtttcacct	cgtccacggg	240
tcccaagatg	attgtggaca	tgcagtcgca	tagcagagtc	atctctcatg	cgggctgcct	300
ggcacagatg	tctttcttgg	tcctttttgc	atgtatagaa	gacatgctcc	tgactgtgat	360
ggcctatgac	agctttgtag	ccatctgtca	ccctctgcac	taccagtgca	tcatgaatcc	420
tcacctctgt	gtcttcttcg	ttttgggtgc	ctttttcctt	agcctgttgg	attcccagct	480
gcacgggttg	attgtgttac	aattcaccat	catcaagaat	gtggaaatct	ctaattttct	540
ctgtgacccc	tctcaacttc	tcaaaacttg	ctgttctgac	agcgtcacca	atagcatatt	600
catatatttt	gatagtacta	tgtttggttt	tcttcccatt	tcagggatcc	ttttgtctta	660
gtataaaatt	gtcccctcca	ttctaaggat	gtcatcgtca	gatgggaagt	ataaagcctt	720
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gtacctgact	tcagctctgt	caccaccccc	caggaaatgg	gtggcggcgt	cagtgatgta	840
cgctgtgggc	acccccatgc	tgaacctttt	catctacagc	ctgagaaaca	gggacataca	900
aagtgccttg	cggaggctgc	gcagcagaac	agtggaaatct	catgatctgt	tccatccttt	960
ttcttgtgt						969

<210> 223

<211> 945

<212> DNA

<213> Unknown (H38g72 nucleotide)

<220>

<223> Synthetic construct

<400> 223

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ttagaactcc	agatttttcta	cttcctgttt	ttctccatag	tctatgcagc	cactgtgctg	120
gggaaccttc	ttattgtggg	caccattgca	tcagagccac	accttcattc	ccctacgtac	180
ttctgtctgg	gcaatctctc	cttcattgac	atgtccctgg	cctcatttgc	cacccccaaa	240
atgattgcag	acttccttag	agaacacaaa	gccatctctt	ttgaaggctg	catgaccag	300
atgtttcttc	tacatctctt	aggggggtgct	gagattgtac	tgctgatctc	catgtccttt	360
gataggtacg	tggtatctg	taagcctcta	cattacctaa	caatcatgag	ccgaagaatg	420
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tcaaccagtg	gcatgattgc	cctgggtgtg	ttcatcctct	tggtgatctc	ttacactatc	660
atcctgggtca	ccgttcggca	gcgttcctct	ggtggatcct	ccaaagccct	ctccacgtgc	720
agtgccact	ttactgttgt	gacccttttc	tttgccccat	gcactttcat	ttatgtgtgg	780
cctttcacaa	atttcccaat	agacaaagta	ctctcagtat	ttataaccat	atacactccc	840
ctcttgaatc	cagtgatcta	taccgttagg	aataaagatg	tcaagtattc	catgaggaaa	900
ctaagcagcc	atatctttaa	atctaggaag	actgatcata	ctcct		945

<210> 224

<211> 963

<212> DNA

<213> Unknown (H38g73 nucleotide)

<220>

<223> Synthetic construct

<400> 224

atgaaaaagt	acatggaaag	gactaattga	acaactgagt	ttgagttgat	tctcataagt	60
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ctatgagtag	tcataagttg	acaaaaactc	ctttttgtca	catgcttagt	ggtgtatcta	120
gtgaccctct	tggggaacag	aatacagatc	atcccaacac	tccttggttc	ccacctatat	180
ttatgccatg	gcaatccctc	cttcctggat	atcgggctta	cgtccctttt	actccctcta	240
tcctaataaa	cttcctatca	gagggaaaaa	aactctcttt	cacagattgt	attatacaaa	300
tgtctatctt	ctattccatg	gggtccacgg	agtgtgtgct	cctagcagtg	atggcatatg	360
ataactgtgt	ggatcatcagc	aaattcctga	gataccctct	catcataaat	aagggtgaata	420
aaataaaaaa	gggtgctttgt	gttttcctgg	ctactgtctc	ttatgaatta	ggattttctca	480
acagacaaaa	tgtattaata	gttacatatg	aatgcacttt	tgtggaaaaac	acatcattaa	540
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gaatataata	atattgggca	aagtaaaactt	ttcatttact	ttattactac	catttcagtt	660
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ccggacaatc	ctcttcctgt	acataaaagtc	aacatctaata	ggcactactt	cagagaaact	840
ggttgacctg	ttctgcgggg	tagtaatgct	catgctcaat	cttatcatct	atagcctggg	900
gaatatggag	gtgcttgggg	ttatgaagaa	attgatcagt	atgagtagac	cctggtgctg	960
gaa						963

<210> 225

<211> 974

<212> DNA

<213> Unknown (H38g74 nucleotide)

<220>

<223> Synthetic construct

<400> 225

cacacggagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggg	cctcgctttg	ctgtccctgt	ccctgtccat	gtccatgtat	120
ctggtcacgg	tgctgaggaa	cctgctcagc	atcctggctg	tcagctctga	ctcccaactc	180
cacacccccca	tgtacttctt	cctctccaac	ctgtgctggg	ctgacatcgg	tttcacctcg	240
cccatgggtc	ccaagatgat	catggacatg	cagtcgcata	gcagagtcac	ctctcatgcg	300
ggctgcctga	cacggatgtc	tttcttggtc	ctttttgcat	gtatagaaga	catgctcctg	360
actgtgatgg	cctatgactg	ctttgtagcc	atctgtcgcc	ctctgcacta	cccagtcac	420
atgaatcctc	acctctgtgt	cttcttcggt	ttgggtgtcct	ttttccttag	cctgttggat	480
tcccagctgc	acagtttagat	tgtgttacaa	ttcactttct	tcaataatgt	ggaaattgct	540
aattttgtct	atgagccatc	tcaacttctc	aaccttgact	gttctgacac	cgatcatcaat	600
agcgtattta	tatatctcga	tagtactgtt	tggttttctt	cccatctcag	ggatcctttg	660
tcttagtata	aaattgtccc	ctccattcta	aggatgtcat	cgtcagatgg	gaagtataaa	720
gccttcgcca	cctgtgggtc	tcacctagca	gttgtttgct	gatttgatgg	aacaggcatt	780
ggcatgtacc	tgacttcagc	tgtgtcacca	ccccccagga	atgggtgtggc	ggcgctcagtg	840
atgtacgctg	tggtcacccc	catgctgaac	cttttcctct	acagcctgag	aaacaggggac	900
attcaaagtg	ccctgcagag	gctgagtagc	agaacagtgg	aatctcatga	tctgttccat	960
cctttttctt	gtgt					974

<210> 226

<211> 957

<212> DNA

<213> Unknown (H38g75 nucleotide)

<220>

<223> Synthetic construct

<400> 226

atgggtaact	ggactgcagc	ggtgactgag	tttgttctgc	tggggttttc	cctgagcagg	60
gaggtgggagc	tgtgtctcct	ggtgtcctcg	ctgcccacgt	tcctgtctgac	tcttctgggg	120
aacctgtctca	tcattctccac	tgtgtgtgct	tgtctccgcc	tccacacccc	catgtacttc	180
ttcttgtgca	acctctctat	cctggacatc	ctcttcacct	cagtcactct	tccaaaagtg	240
ttggccaact	taggatctag	ggataaaacc	atctcctttg	cgggatgtat	caccacagtg	300
tattttctact	ttttcttggg	cacagttgag	ttcctcctgc	tgacgggtcat	gtcctatgac	360
cgttatgccca	ccatctgctg	ccccctggcg	tacaccacca	tcagtagacc	ttctgtctgc	420
attgggaccg	ttgtattctc	ttgggtggga	ggcttctctg	ctgtgtctct	tccaaccatc	480

ctcatctccc	agctgccctt	ctgtggctcc	aatatcatta	accacttctt	ctgtgacagt	540
ggacccttgc	tggccctggc	ctgtgcagac	accactgcc	tcgagctgat	ggattttatg	600
ctttcttcca	tggtcatect	ctgtgcata	gtcctcgtag	cctattccta	tacgtacatc	660
atcttgacca	tagtgcgcat	tccttctgca	agtgggaagg	agaaggcctt	taatacctgt	720
gcttcccacc	tgaccatagt	catcattcct	agtggcatca	ctgtgtttat	ctatgtgact	780
ccctcccaga	aagaatatct	ggagatcaac	aagatccctt	tggttctgag	cagtgtgggtg	840
actccattcc	tcaacccctt	tatatatact	ctgaggaatg	acacagtgc	gggagtcctc	900
agggatgtgt	gggtcagggg	tcgaggagtt	tttgaaaaga	ggatgagggc	agtgtctg	957

<210> 227

<211> 939

<212> DNA

<213> Unknown (H38g76 nucleotide)

<220>

<223> Synthetic construct

<400> 227

atggaaactg	caaattacac	caaggtgaca	gaatttggtc	tacttggcct	atcccagact	60
cgggaggtcc	aactagtcct	atttggtata	tttctatcct	tctatttggt	catcctacca	120
ggaaatatcc	ttatcatttg	caccatcagg	ctagaccctc	atctgacttc	tcctatgtat	180
ttcctgttgg	ctaactctgg	cctccttgat	atttggtact	cttccattac	agccccataa	240
atgctcatag	acttctttgt	ggagaggaag	ataatttcc	ttggtggatg	cattgcacag	300
ctcttcttct	tacactttgt	tggggcttcg	gagatgttct	tgctcatagt	gatggcctat	360
gaccgctatg	ctgctatctg	ccgaccctc	cactatgcta	ccatcatgaa	tcgacgtctc	420
tgctgtatcc	tggtggctct	ctcctggatg	gggggcttca	ttcattctat	aatacaggtg	480
gctctcattg	ttcgacttcc	tttctgtggg	cccaatgagt	tagacagtta	cttctgtgac	540
atcacacagg	ttgtccggat	tgcctgtgcc	aacaccttcc	cagaggagtt	agtgatgatc	600
tgtagtagtg	gtctgatctc	tgtggtgtgt	ttcattgtct	tgtaaatgtc	ctatgccttc	660
cttctggcct	tgtcaagaa	acattcaggc	tcagatgaga	ataccaacag	ggccatgtcc	720
acctgtctatt	cccacattac	cattgtgggtg	ctaagtgttg	ggccatccat	ctacatttat	780
gctcgcccat	ctgactcatt	ttccctagat	aaagtgggtg	ctgtgtttca	tactgttaata	840
ttccctttac	ttaatcccat	tatttacaca	ttgagaaaca	aggaagtaaa	ggcagccatg	900
aggaaggtgg	tcaccaaata	tattttgtgt	gaagagaag			939

<210> 228

<211> 940

<212> DNA

<213> Unknown (H38g77 nucleotide)

<220>

<223> Synthetic construct

<400> 228

atggaaagtc	aaaggaacat	ataaaaaattc	atactcatga	gcctttcctc	tatccagaac	60
atacaaatat	ttgtttttgt	gttcttattt	tgtaatgttg	ccatcttggt	gggaaacttt	120
ctgacccctta	tctctatttg	atgtagtcct	ctttttaacc	aaccaatgca	ctatttcttc	180
aggctatatg	aatatctact	atacctcctg	tgtcacaccc	aaaataattg	gtgatctagt	240
agtgggaaga	ataaacatct	cctatgatag	gagtccttcc	catgcacttc	tttggaatca	300
ttgaaatctt	catccttaca	gtcatggctt	ttgatcacta	tggtgccatc	tgcaaacctc	360
cccgtacctt	aattatcatg	aataggacaa	aatacaatac	tctaactctg	gttgcttggc	420
tgttggggct	ttccattctt	tgtttcagtt	ttctatgaaa	atctggttgc	ctttctgtgg	480
ctccaacaaa	gttgatgact	aatattaaga	tatttttcc	ttactgaaag	tcgcttgtag	540
tgatacctgc	atcaactggg	tcctcgtggg	tgccaattct	ggaatgtttg	ccttggtaac	600
cttgttctgt	cgtttggctc	ttatgtcatt	atactattcc	ccttaaaaaa	tcattcagta	660
gagggaagat	gcaaagccct	ctctacctgt	ggatctcata	tcaccatggg	aatctttttc	720
ttcgaacctt	caatctttgc	ctaccttaga	ccttctcact	tttcctgagg	acaaaatata	780
tgtctgtttt	tacactatta	ttgtctcaat	gttcaaccac	ctaactata	acctgagaaa	840
tacagagatg	aaaaaggcca	tgagaaaagt	ttggtaccaa	atatcatttt	cagaagaaaa	900
acagctgatt	tgctcctact	agtgtagtaa	agaactttat			940

<210> 229
 <211> 912
 <212> DNA
 <213> Unknown (H38g78 nucleotide)

<220>
 <223> Synthetic construct

<400> 229
 atgagaaatg gcacagtaat cacagaattc atcctgctag gctttcctgt tatccaaggc 60
 ctacaaacac ctctctttat tgcaatcttt ctcacctaca tattaaccct tgcaggcaat 120
 gggcttatta ttgccactgt gtgggctgag ccagggtac aaattccaat gtacttcttc 180
 ctttgtaact tgtctttctt agaaatctgg tacaccacca cagtcatccc caaactgcta 240
 ggaacctttg tagtggcaag aacagtaatc tgcattgtct gctgcctgct gcaggccttc 300
 ttccacttct tctgtgggac caccgagttc ttgatectca ctatcatgtc ttttgaccgc 360
 tacctacca tctgcaatcc ccttcaccac ccaccatca tgaccagcaa actctgcctg 420
 cagctggccc tgagctcctg ggtgggtggc ttcaccattg tcttttgtca gacgatgctg 480
 ctcatccagt tgccattctg tggcaataat gttatcagtc atttctactg tgatgttggg 540
 ccagtttga aagccgctg catagacacc agcattttgg aactcctggg cgtcatagca 600
 accatccttg tgatcccagg gtcacttctc ttaatatga tttcttatat ctacattctg 660
 tccgcaatcc tacgaattcc ttcagccact ggccaccaa agactttctc tacctgtgcc 720
 tgcacctga cagttgtctc cctgctctac ggggctgttc tgttcatgta cctaagaccc 780
 acagcacact cctcctttaa gattaataag gtggtgtctg tgctaaatac tatcctcacc 840
 ccccttctga atccctttat ttatactatt agaaacaagg aggtgaaggg agccttaaga 900
 aaggcaatga ct 912

<210> 230
 <211> 963
 <212> DNA
 <213> Unknown (H38g79 nucleotide)

<220>
 <223> Synthetic construct

<400> 230
 atgacaattc ttcttaatag cagcctccaa agagccactt tcttctgac gggcttccaa 60
 ggtctagaag gtctccatgg ctggatctct attcccttct gcttcatcta cctgacagtt 120
 atcttgggga acctcaccat tctccacgtc atttgtactg atgccactct ccatggaccc 180
 atgtactatt tcttgggcat gctagctgtc acagacttag gcctttgcct tccacactg 240
 cccactgtgc tgggcatttt ctgggttgat accagagaga ttggcatccc tgctgtttc 300
 actcagctct tcttcatcca cacttgtct tcaatggagt catcagttct gttatccatg 360
 tccattgacc gctacgtggc cgtctgcaac ccaactgcat actccaccgt cctgacacct 420
 gcatgtattg tcaagatggg gctaagctca gtgcttagaa gtgctctct catcctcccc 480
 ttgccattcc tctgaagcg cttccaatac tgccactccc atgtgctggc tcatgcttat 540
 tgtcttcacc tggagatcat gaagctggcc tgctctagca tcattgtcaa tcacatctat 600
 gggctctttg ttgtggcctg caccgtgggt gtggactcac tgctcatctt tctctcatac 660
 gccctcatcc ttgcgaccgt gctcagcatt gcctcccacc aggagcgact ccgagccctc 720
 aacacctgtg tctctcatat ctgtgctgta ctgctcttct acatcccat gattggcttg 780
 tctctgtgac atcgttttgg tgaacatctg ccccgcttg tacacctct catgtcctat 840
 gtgtatctgc tggtagcacc ccttatgaac cccatcatct acagcatcaa gaccaagcaa 900
 attcgccagc gcatcattaa gaagtttcag ttataaagt cacttaggtg tttttggaag 960
 gat 963

<210> 231
 <211> 968
 <212> DNA
 <213> Unknown (H38g80 nucleotide)

<220>
 <223> Synthetic construct

<400> 231

atggggaacc	acaccaccgt	caccgagttt	gtcctgctgg	ggctctcaga	gacctgtgag	60
ctgcagatgc	tcatcttcct	ggggctcctc	ctgacctacc	tcctcacact	gctggggaat	120
ctggatcatcg	tggatcatcac	cctcatggac	aggcgctcc	acaccacat	gtactacttc	180
ctccgcaact	ttgctgtccc	ggagatctgg	ttcacctcgg	tcctcttcc	caaggtgctg	240
gccaacatcc	tcacaggata	caagaccatt	ccctcccagg	ctgcttcctg	caaagtttgc	300
tctatttttt	cttgggcacc	acagagttct	tcctcctggc	ggtgatgtcc	tttgacaggt	360
acgtggccgt	atgtaaccct	ttgcattatg	ccaccatcat	gagcaaaagg	gtctgtgtcc	420
agctagtcc	ctgttagtgg	atgacaggat	tccttctcat	cattattcca	agttttcttg	480
tccttcagca	gccattctgt	ggccccaaca	tcattaacca	tttcttctgt	gacaactttc	540
ccctcttgaa	actcatttgt	gcagacatga	ctctgataga	gctcctgggt	ttgtttatag	600
ccaacgtcag	cttactgggc	actctgtcta	tgacggccac	ttgctatggc	cacatcctcc	660
acgccattct	gcacatcccc	tcagccaaag	agaagcagaa	agccttctcc	gcctgctcct	720
cccacatcat	tgtcgtgtct	ctcttctatg	gcagctgcat	cttcatgtac	attcagtcag	780
gcaagagtga	ccagaaggaa	gacaggaaca	aggtggcggc	attgcttaac	accgtggtga	840
ccctgatgct	caaccccttc	atctacaccc	tgaggaaaca	acaggtgaaa	caggtgttta	900
ggcagcaggt	gagcaaaactc	ctcatataaa	gctgtgtaaa	aaaaaaactg	aagctcagca	960
tccccaga						968

<210> 232

<211> 949

<212> DNA

<213> Unknown (H38g81 nucleotide)

<220>

<223> Synthetic construct

<400> 232

gaaataaaga	tagcaaacaa	cacagtagtg	acagaattta	tcctccttgg	tctgactcag	60
tctcaagata	ttcagctctt	ggtctttgtg	ctgatcttaa	ttttctacct	tatcatcctc	120
cctggaaatt	tcctcatcat	tttcaccata	aagtcagatc	ctgggctcac	agcacccttc	180
tatttctttc	tgggcaactt	ggccttctctg	gatgcatact	actccttcat	tgtggctccc	240
cggatgttgg	tggacttctt	ctctgcgaag	aatgtaatct	cctacagagg	ctgcatcact	300
cagctctttt	tcttgcactt	ccttggagga	ggagagggat	tactccttgt	gatgtagcct	360
ttgaccgcta	catcgccatc	tgccggcctc	tgcactatct	tactctcatg	aacccagag	420
cttgctatgc	aatgatgttg	gctctgtggc	ttgggggttt	tgtccactcc	attatccagg	480
tggtcctcat	cctccgcttg	cctttttgtg	gcccaaacca	gctggacaac	ttcttctgtg	540
atgtcccaca	ggatcatcag	ctggcttgca	ccgacacgtt	tgtgggtggag	cttctgatgg	600
tcttcaacag	tggcctgatg	acactcctgt	ctttctgggg	cttctggctt	cctatgcagt	660
catcctgtgc	catgttcgta	aggcagcttc	tgaattgaag	aacaaggcca	tgtccacgtg	720
caccactcat	gtcattatta	tacttcttat	gtttggacct	gctatcttca	tctacatgca	780
ccccttcagg	gccttaccag	ctgacaaggt	ggtttctttc	tttcacacag	tgatctttcc	840
attgatgaat	cctatgattt	atacccttcg	aaaccaggaa	gtgaaaactt	ccatgaagag	900
gttattgagt	cgacatgtag	tctgtcaagt	ggactttata	ataagaaac		949

<210> 233

<211> 857

<212> DNA

<213> Unknown (H38g82 nucleotide)

<220>

<223> Synthetic construct

<400> 233

gtcatacgaa	accagacaat	ggtaactgaa	ttcacccggt	ctcccttcct	gctgtccagg	60
agcttcagat	ttggctatgt	gtccttctct	ggctggttca	tatgctcacc	ataacaggaa	120
accttttctg	cattttctta	acgtggacag	ataattgtct	ccaaacccca	atggacttgt	180
tccttagaaa	aaagtcatat	cgttctctgg	ctgcatcacc	caaataatatt	tctacttctt	240
tctagggaca	gtggcgttta	tcccttggc	agtgacatcc	ttcaaact	gcatggcaac	300
ctgtgacccc	ctgtgcagca	ccatcattgc	aaaaagcagg	gcctgcctcc	tgtgtgctct	360
gggatgctgg	atgggaacct	tcctggctgt	gttgcgctctg	actattgtgg	tgtccaggtt	420

gccagactgt	actgaaaaaa	ttagtccctt	cttctgtgac	attgcctctt	tactgcaggt	480
ggcctgtatt	gatattcatt	tcattgagat	gataagcttc	ctttgatcat	ctcttatggg	540
cctgacctcg	ctgggtgctta	atgccacatc	ctacgcctac	atcattttctc	cctcctgtgc	600
atccccctcag	cccaaggatg	tcaggaggcc	ttttccacct	gtgcttcaca	catcaccatc	660
atcttttattg	cctgccgaaa	ctccatctcc	acgtgtgtga	ggcctaacct	gaggtattag	720
ctggattttg	acaaagtgc	agctatcctc	actatagtag	tgacttcttt	tctgaatccc	780
cgcattttata	gcttgaggta	aaggaagtat	gaagggagtc	aatttgcaca	atactgtcac	840
cacattccaa	aggaaca					857

<210> 234

<211> 921

<212> DNA

<213> Unknown (H38g83 nucleotide)

<220>

<223> Synthetic construct

<400> 234

atggaaagcg	agaacagaa	agtgataaga	gaattcatcc	tccttgggtct	gacccagtct	60
caagatatcc	agctcctgg	ctttgtgcta	gttttaatat	tctacttcat	catcctccct	120
ggaaattttc	tcattatttt	caccataaag	tcagaccctg	ggctcacagc	ccccctctat	180
ttctttctgg	gcaacttggc	cttcctggat	gcctcctact	ccttcactgt	ggctcccccg	240
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ctctttttct	tgcacttcct	tggaggaggg	gagggattac	tccttgttgt	gatggccttt	360
gaccgctaca	tcgccatctg	ccggcctctg	cactatccta	ctgtcatgaa	ccctagaacc	420
tgctatgcaa	tgatgttggc	tctgtggcct	gggggttttg	tccactccat	tatccagggtg	480
gtcctcatcc	tccgcttgcc	ttttgtggc	ccaaaccagc	tggacaactt	cttctgtgat	540
gtcccacagg	tcacaaagct	ggcctgcacc	gacacatttg	tgggtggagct	tctgatgggc	600
ttcaacagtg	gcctgatgac	actcctgtgc	tttctggggc	ttctggcctc	ctatgcagtc	660
attctttgtc	gcatacgagg	gtcttctctc	gaggcaaaaa	acaaggccat	gtccacgtgc	720
atcacccata	tcattgttat	attcttcatg	tttggacctg	gcactctcat	ctacacgcgc	780
cccttcaggg	ctttcccagc	tgacaagggtg	gtttctctct	tccacacagt	gatttttctc	840
ttgttgaaatc	ctgtcattta	tacccttcgc	aaccaggaag	tgaaagcttc	catgaaaaag	900
gtgtttaata	agcacatagc	c				921

<210> 235

<211> 927

<212> DNA

<213> Unknown (H38g84 nucleotide)

<220>

<223> Synthetic construct

<400> 235

atggaaaatc	aaaacaatgt	gactgaattc	attcttcttg	gtctcacaga	gaacctggag	60
ctgtggaaaa	tattttctgc	tgtgtttctt	gtcatgtatg	tagccacagt	gctggaaaaat	120
ctacttattg	tggttaactat	tatcacaagt	cagagtctga	ggtcacctat	gtattttttt	180
cttaccttct	tgtccctttt	ggatgtcatg	ttctcatctg	tcgttgcccc	caagggtgatt	240
gtagacaccc	tctccaagag	cactaccatc	tctctcaaag	gctgcctcac	ccagctgttt	300
gtggagcatt	tctttgggtg	tgtggggatc	atcctctctc	ctgtgatggc	ctatgaccgc	360
tacgtggcca	tctgtaagcc	cctgcactac	acgatcatca	tgagtccacg	gggtgtgctgc	420
ctaattggtg	gaggggcttg	gggtggggga	tttatgcacg	caatgatata	acttctcttc	480
atgtatcaaa	tacccttctg	tggtccta	atcatagatc	actttatatg	tgatttgttt	540
cagttgttga	cacttgccctg	cacggacacc	cacatcctgg	gcctcttagt	taccctcaac	600
agtgggatga	tgtgtgtggc	catctttctt	atcttaattg	cgctctacac	ggctcatccta	660
tgctccctga	agtcttacag	ctctaaaggg	cggcaciaag	ccctctctac	ctgcagctcc	720
cacctcacgg	tggttgtatg	gttctttgtc	ccctgtattt	tcttgtacat	gaggcctgtg	780
gtcactcacc	ccatagacaa	ggcaatggct	gtgtcagact	caatcatcac	acccatgtta	840
aatcccttga	tctatacact	gaggaatgca	gaggtgaaaa	gtgccatgaa	gaaactctgg	900
atgaaatggg	aggctttggc	tgggaaa				927

<210> 236
 <211> 933
 <212> DNA
 <213> Unknown (H38g85 nucleotide)

<220>
 <223> Synthetic construct

<400> 236
 gtagaggata tggtagccatt ctctatgagg atttctggca tttttcaaatt cttcatttta 60
 cggctatcat caccttatct actaatattc tgtactgaca tgtgtacat ttcagttttac 120
 atattctcat atagtaaaat gttaactgca aggggaattta cctcaaacc aaaccattaa 180
 cgtaacttca gagacaatat ggattaagat tatccatgat ttccttcag aaccaagac 240
 tatctccttt gagggctgca tggcccagat attcttggtc catgtctttg ctgggtggtga 300
 gatggtgctc cttgtagcca tggcatatga catatatgta gccatatgca aacctctcca 360
 ttatgcaacc atcatgaact tgtgcacatg tacaggccta gtggtaggat cttgggtcac 420
 tggagttatg cactccctga gccagtttag tttcactgta agtttgccct tctgtggccc 480
 aaacatagtg gacagttatt attgtgacct tactttggtc atcaaacttg cctgtacaga 540
 tacttatatc cctgaagcgt tgatgctttt ggacagtggg cttatggggg tgacttcatt 600
 ttgcttttgc tgatctccta cacggtcatt ctgattactg tgcagcgacc ttcctcagca 660
 ggtatggcca aggcctcgag cactctgact gccacgtga ctgtggtgac cctgttcttt 720
 gggccttgta tcttcatcta tgccctggcct ttcagcaact taccagtgga taacattttg 780
 tctgtattct ctacagtttt cacacctata ttaaaccctt ttatctacac actgagaaac 840
 aaagaggtaa aatcagcaat tcataacctg aagaccagt atgtaactc caggctgtct 900
 tcccagctct ctctcatagg actagatttg ttg 933

<210> 237
 <211> 629
 <212> DNA
 <213> Unknown (H38g86 nucleotide)

<220>
 <223> Synthetic construct

<400> 237
 ttgggaaatg tctcaacaga gactactttt atttttggtt gtttcacaaa tggacaacaa 60
 ttccagcctg tatgcttctc ctcaatttaa gtgcttggcc actcagtgtc tgggctaagt 120
 tctctectca acatcctggg gaacttggtc tcagcttggt tctttttggt tttgtttttc 180
 agatgtccta ctcccttggtc attttaatta aaatgataat gaactctata tctgagaggt 240
 acatcaccac taatttgaag tgcaagattc tgcccttggtc tttatctgct ttgctatcag 300
 tgagcactct aatacttttg gcttgggggtc actgtgggat ctgtgtgcct cagggtctgtt 360
 ctctgacgat gcttggcctt cactggggta ggtattgatg gtgtcatggc ccaccagag 420
 gcaatggcca gtctgtcttt ctgtgaccgc agcatcatca accactgtgt gtggcacact 480
 tcttttcata aaactctcct tagagcacct gcttcacaag ctgggtgattt ttagtcatt 540
 gcgtagtgtc tgatcatctt catctctgac atactatcct ttccaccatc ctccattttc 600
 tctttcctga ggcaaaactca aaagctttt 629

<210> 238
 <211> 822
 <212> DNA
 <213> Unknown (H38g87 nucleotide)

<220>
 <223> Synthetic construct

<400> 238
 atggggaatc tgggcatgat catggtcatc aggatcaacc ccaaactcca caccctatg 60
 tactttttcc tcagccactt gtcctttggt gattttctgtt attccaccac aattacacca 120
 aaactgctgg agaacttggt tgtggaagac agaatcatct ctttcacagg atgcatcatg 180
 caattcttct ttgcctgtat atttgtggtg acagaaacat tcatgctggc agcgatggct 240
 tatgacagat ttgtggcagt gtgtaacctc ctgctttaca cagttgcaat gtcccagagg 300

ctttgtctct	tgtagtggtc	tgcatacatc	tcttgaggtt	tagtttggtc	cttaacatac	360
acatactttc	tgtagacttt	atctttttgt	aggactaact	tcattaataa	ctttgtctgt	420
gagcacgctg	ccattgttgc	tgtgtcctgc	tctgacccct	acatgagcca	gaaggtcatt	480
ttagtttctg	caacattcaa	tgaaataagc	agcctgggtga	tcattctcac	ttcctatgct	540
ttcattttta	tcaactgtcat	gaagatgcct	tccactgggg	ggcgcaagaa	agcgttctcc	600
acgtgtgcct	cccacctgac	cgccattacc	attttccatg	ggactatcct	ttttctctac	660
tgtgttccta	actccaaaag	ttcatggctc	atggccaagg	tggcctctgt	cttttacaca	720
gtggtcattc	ccatgctgaa	ccccttgatc	tatagcctca	ggaacaaaga	tgtaaaagag	780
acagtcagga	agttagtcac	taccaaatta	ttatgtcata	aa		822

<210> 239

<211> 1041

<212> DNA

<213> Unknown (H38g88 nucleotide)

<220>

<223> Synthetic construct

<400> 239

atgaccaaca	gcagtgctca	gggagacttc	atcctgggtg	gtttctctca	tcagccccac	60
ctggaaaaga	tcctctttgt	ggctgttttg	atatectatc	tccttaccct	tgtgggaaat	120
acagtaatta	ttctgatctg	ctctgtagac	cctaaactca	agacacccat	gtattttttc	180
ttactcacct	ctccttagtt	gatatactgt	ttaccaccag	tattgtcccc	cagctgctgt	240
ggaacctaaa	aggacctgac	aaaacaatca	cattcctggg	ttgtgtcatc	cagctctaca	300
tctccctggc	attgggctcc	actgagtggt	tcctcctggc	tgtaatggct	tttgatcgct	360
atgctgcagt	ttgcaaacct	ctccactata	ccgccgtaat	gaaccctcag	ctgtgccagg	420
ttctggcagg	gggtgcgtgg	ctgagtgagg	tgggaaacac	tcttatccag	ggcactgtca	480
ccctctggct	tcctcgctgt	ggacaccgat	tgctccaaca	tttcttcgtg	aggtaccctc	540
catgattaag	cttgcatgtg	tggacatcca	tgataatgag	gttcagctct	ttgttgcttc	600
actggctctg	ctcctcttgc	ccttagtgct	aatactgctg	tcctatggac	atatagccaa	660
ggtggtcata	aggatcaagt	cagtcacagg	ctgggtgcaa	ggcctgggga	catgtggatc	720
ccatttgata	gtagtgtccc	tcttctgtgg	gaccatcaca	gctgtctaca	tccagtccaa	780
cagttcttat	gcccattgct	atgggaagtt	catctccctc	ttctatacac	ttgtgacccc	840
gacctcaat	cctctcatct	acacactgag	gaataatgac	gtgaaaggag	cactgcgatt	900
atttaacaga	gacttaggca	cataaaaaat	gaagcagagt	acacagcgct	caactttttt	960
cacaaagcaa	ctttaaaggt	catcttgat	aatttttcac	tcaagaactt	tgccagctctg	1020
taaaggaaga	gatgtaattc	t				1041

<210> 240

<211> 957

<212> DNA

<213> Unknown (H38g89 nucleotide)

<220>

<223> Synthetic construct

<400> 240

atggataagt	ccaattcttc	agtgggtgtc	gaatttgtag	tggtgggact	ctgtagttct	60
caaaaactcc	agcttttcta	tttttgtttc	ttctctgtgt	tgtatacagt	cattgtgctg	120
ggaaatcttc	tcattatcct	cacagtgaat	tctgatacca	gcctgcactc	ccctatgtac	180
tttctcttgg	gaaacctttc	ctttgttgac	atttgtcagg	cttcttttgc	taccctaaa	240
atgattgcag	attttctgag	tgacacagag	accatatctt	tcagtggctg	catagcccaa	300
attttcttta	ttcacctttt	tactggaggg	gagatgggtc	tacttgtttc	gatggcctat	360
gacaggatag	tagccatatg	caaaccctta	tactatgtgg	tcatcatgag	ccgaaggaca	420
tgcactgtct	tggtaatgat	ctcctgggct	gtgagcttgg	tgcacacatt	aagccagtta	480
tcattttact	tgaacctgcc	tttttggtga	cctaattgtg	tagacagctt	tttttgtag	540
cttctctgag	tcaccaaaact	tgccctgcctg	gactcttaca	tcattgaaat	actaattgtg	600
gtcaatagtg	gaattctttc	cctaagcact	ttctctctct	tggtcagctc	ctacatcatt	660
attcttggtt	cagtttggct	caagtcttca	gctgcaatgg	caaaggcatt	ttctacgctg	720
gcttcccata	ttgcagtagt	aatattattc	tttggaacct	gcactttcat	ctatgtgtgg	780
ccctttacca	tctctccttt	ggataaaatt	cttgccatat	tttacctgt	tttccccccc	840

gtcctaaacc	ccattatttta	tacactaagg	aatagggata	tgaaggctgc	cgtaaggaaa	900
attgtgaacc	attacctgag	gccaaaggaga	atttctgaaa	tgtcactagt	agtgaga	957

<210> 241

<211> 935

<212> DNA

<213> Unknown (H38g90 nucleotide)

<220>

<223> Synthetic construct

<400> 241

atgcctgccca	agaactcctc	ctccgtgaca	gcgtttatcc	tctcaggctt	aaccgaccag	60
ccgggactcc	agatccccgc	cttcttcctg	tttctagggt	tctacgcggt	cacgggtggtg	120
gggaacctgg	gcttgataat	cctgataggg	ctcaactctc	gcctgcatat	ccccatgtac	180
tttttccctt	tcaacttgct	cttcatagat	tttagttatt	ccactaccct	cgccccctaaa	240
atgctgatga	gctttgtctc	agagaacatc	atttccatg	cagggtgtat	gactcagctt	300
tttttcttct	gtttctttgt	ctttcttgaa	tcctatatcc	tatcagcgat	ggcgtatgac	360
cgctacgtgg	gcatctgtaa	cccactgttg	tacacgggtc	ccatgtctcc	ccagatgtgt	420
ttgtcccttt	tactgggtgt	ctatgggatg	gggattttgg	ggctgtggct	catatgggaa	480
acataatgtt	tatgtccttt	tgtggagaca	accttgtcaa	tcactatatg	tgtgacatcc	540
ttcctctcct	tgagctctcc	tgcaacagct	cttacataaa	tttgctgggtg	gtttttatta	600
ttgtgaccgt	tggcattggg	gtgccgattg	tcaccatttt	tctctcttat	ggttttattc	660
tttccagcat	tctccacatt	agttccacag	agggcaggtc	taaagccttc	agtacctgca	720
gttcccacat	aattgtggta	tcgtttttct	ttgggtcagg	tgctttcatg	tacctcaaac	780
caccttctat	tctacccttg	gaccagggga	aagtgtcctc	cattttttgt	actgctgtgg	840
tgcccatgtt	taaccatta	atctacagcc	tgaggaataa	agatgtcaaa	gttgccctga	900
ggagaacctt	ttgcagaaaa	ttagtctctt	aaaaa			935

<210> 242

<211> 1071

<212> DNA

<213> Unknown (H38g91 nucleotide)

<220>

<223> Synthetic construct

<400> 242

atgaattggg	taaataagag	tgtccacacag	gagttcattc	tgttagtttt	ctcagatcaa	60
ccatggctag	agattccacc	ctttgtgatg	tttctgtttt	cctatatctt	gacaatcttt	120
ggcaatctga	caataattct	tgtgtcacat	gtggatttca	aactccacac	ccctatgtac	180
ttttttctta	gcaatctctc	actcctggac	ctttgtcata	ccacaagtac	agttccacaa	240
atgctggtaa	acatatgcaa	caccagggaa	gtaatcagtt	atgggtggctg	tgtggcccag	300
cttttcattt	tcctggcctt	gggttccaca	gaatgtcttc	tcctggccgt	catgtgcttt	360
gataggtttg	tagctatttg	tcggcctctc	cattactcaa	ttatcatgca	ccagaggctc	420
tgcttccagt	tggcagctgc	atcctggatt	agtggcttta	gcaattcagt	attacagtcc	480
acctggacac	ttaagatgcc	actgtgtggt	cacaaagaag	tggatcactt	cttctgtgaa	540
gtccctgctc	tgctcaagtt	gtcctgtggt	gacacaacag	caaatgaggc	tgaactattc	600
ttcatcagtg	tgctattcct	tctaataccc	gtgacactca	tccttatatc	gtatgctttt	660
attgtccaag	cagtgttgag	aatccagctt	gctgaaggtc	aacgaaaggc	atttgggaca	720
tgtggctccc	atctaattgt	ggtgtcactt	ttttatggta	cagctatctc	catgtacctg	780
caaccacctt	caccagctc	caaagaccgg	ggaaagatgg	tttctctctt	ctgtggaatc	840
attgcaccca	tgctgaatcc	ccttatatat	acacttagga	acaaagaggt	aaaggaagcc	900
tttaaaaggt	tgggtgcaaa	gagtcttctt	aatcaagaaa	taagaaatat	gcaaatgata	960
agctttgcta	aagacacagt	gcttacttac	cttactaact	tctccgcaag	ttgtcctatt	1020
tttgtcatta	ctatagaaaa	ctattgtaat	ctccctcaaa	gaaaatttcc	t	1071

<210> 243

<211> 959

<212> DNA

<213> Unknown (H38g92 nucleotide)

<220>

<223> Synthetic construct

<400> 243

cacacagagc	cacggaatct	cacaggagcc	tgagaactcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcccat	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacggtg	120
ctgaggaacc	tctcatcag	cctggctgtc	agctctgact	cccacctcca	caccccaatg	180
tgcttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctcggc	cacggttccc	240
aagatgattg	tggacatgcg	gtcgcatagc	ggagtcacat	cttatgcgga	ctgcctgaca	300
cggatgtctt	tcttggtcct	ttttgcatgt	gtagaagaca	tgctcctgac	tgtgatggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttagtttc	gggtgccttt	tccttagcct	gttggattcc	cagctgcgca	480
gttggattgt	gttgcaattc	accttcttca	agaatgtgga	aatctcta	tttgtctgtg	540
acccatctca	acctctcaag	cttgccctgt	ctgacagcat	catcgatagc	atgttcatat	600
atttcgatag	tactatgttt	ggttttcttc	ccatttcagg	gacctttttg	tcttactata	660
aaattgtccc	ctccattcta	aggatttcat	cgtcagatgg	gtagtataaa	gccttctccg	720
cctgtggctc	tcacctgcca	gttgtttgct	tattttatgg	aacaggcatt	ggcgtgtacc	780
tgacttcagc	tgtggcacca	ccccctcagga	atgggtgtgg	ggcgtcagtg	acgtatgctg	840
tggtcacccc	catgctgaac	cctttcatct	acagcctgag	aaacagggac	attcaaagcg	900
ccctgtggag	gctgcgagc	agaacagtca	aatctcatga	tctgttccat	cctttttct	959

<210> 244

<211> 939

<212> DNA

<213> Unknown (H38g93 nucleotide)

<220>

<223> Synthetic construct

<400> 244

atggaggggt	tcaactgttc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agagattctt	ttttgtggta	ttttctgtct	tctattttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtgcta	tcacacctac	accttcactc	tcccatgtac	180
ttcctgctca	gcaacctgtc	tctcattgac	atgtgcctgt	cctcctttgc	cacaccaaag	240
atgattatgg	acttttttgc	tctgcgtaag	accatctctt	ttgaaggctg	catttctcag	300
atcttttttt	gcacctcttc	accgggactg	agattgtgct	gctgatctcc	atgtcttttg	360
acaggatat	tgccatatgt	aaacctctcc	attattcaac	aattatgagc	caaagagtgt	420
gtgttgagct	tgtggccgtt	tcttggacag	tgggctttct	gcatacaatg	agccaattag	480
cttttaccct	ctatttgccc	ttctgtggtc	ccaatgttgt	agagtttttt	ctgtgatctt	540
cctttgggtca	tccagctagc	ttgtatggat	atztatgttc	ttgggatctt	catgatttca	600
actagtgggt	tgattgctct	tataagtttt	ctgcttttgc	tcacctccta	catcattgtt	660
cttattactg	tcagggaacta	ctcctccaca	ggatcctcca	aggctctttc	tacctgtaca	720
gcacatttta	ttgttgtgtt	aatgttcttt	gggcccgtga	ttttcattta	tgtgtggcct	780
tccacaaaact	tcttggtaga	caaaattctc	tctgttttct	ataccatctt	cactcccttt	840
ctgaatccac	ttatctatac	tttgagaaac	caggaagtga	agacagcaat	gaagaagtaa	900
ctgaatatct	agtatttcag	tcttgggaaa	actgctccg			939

<210> 245

<211> 1014

<212> DNA

<213> Unknown (H38g94 nucleotide)

<220>

<223> Synthetic construct

<400> 245

atgatattgc	ctgctagctt	ttcttaagga	acaatggaaa	caagcagtgt	aagttctgga	60
acagatttca	tccttctggg	gttttctgat	cgaccccaat	tagagcacat	catctcagtg	120
gttgtcttca	tcattctatat	tgtgactctg	gtaggaaata	caaccatcat	tcttgtatct	180
tatctagaca	cccagctcca	taccttcatg	tattttttct	tatccaattt	gtctttcttg	240

gacctctgtt	atacaactag	cattatcccc	cagatgctgg	caaatacaatg	gggccccaaa	300
aaatctatta	cttatggagg	gtgtgtactc	caattctttt	ttgtccttga	cttgggagcc	360
acagaatgtc	ttctgttggc	tgtgatggcc	tatgatcggt	atgctgctgt	ctgtcaacct	420
cttcactaca	ccttaaaatg	caccctcagc	tttgccactg	cctgggttgag	tggctcttgcc	480
agtgccttaa	ttgtttgtct	cttgactttg	aagttgccaa	gatgtgggca	ccgggaagtg	540
gataattttt	tctgtgagat	gccagcattg	atcaagatgg	cttgtgtcta	ttcaaaaagta	600
attgagattg	ttgtctttgc	tttcggagtg	gtatttcttt	tcgtacctct	atcactaatt	660
cttatctcat	atggagttat	cactcaagct	gtaatgagga	tcaagtcagc	aacaagggtg	720
caaaagatcc	ttaatacatg	tggctccac	ctcacagtag	taattctgtt	ttatgggaaca	780
atcatttata	tatacatgaa	gccacagaat	accatatccc	aagatgaagg	gaagttcttc	840
actcttttac	acaatcatca	caccagcct	taaccttccc	atctacactt	taagaaacaa	900
agatgtaaag	agtgcactga	agagaatact	gtggatgaaa	aaatcttcag	cagaatcatg	960
aattagatgg	aaaaaagtag	aatgtagagc	actaaagaaa	tattggcatt	tatc	1014

<210> 246

<211> 941

<212> DNA

<213> Unknown (H38g95 nucleotide)

<220>

<223> Synthetic construct

<400> 246

atgcaccaag	gaaattgaac	tactgtctct	aaattctttc	tcttgggaat	cacaacaaag	60
cctaaagagc	agcagtttat	cttcatgctg	tttctatgca	cgtatctggt	cactatggta	120
agaaatttac	ttatcatcct	ggccgttgct	agtgatgctc	acctccatgg	ccccatatat	180
ttcttccttg	ccaatctatc	tttactaac	gtctgcatca	caaccactac	agtccccaaa	240
atcttggcag	atattcaaag	ccagaattca	accatatcct	ttgaaggatg	ccttgcacaa	300
atgtagtttt	aaatattcct	ggtggatctg	gataatttcc	tattggtaga	catggcatat	360
aattgatata	ttgccatctg	tcaccatta	cactatatgt	ggtagtactg	agtccaaga	420
actgtgccct	gttgggttg	actccatggg	ttatctccaa	ccttgtctca	atactgcata	480
tcagtctgct	aagccactta	actttctgtg	atttcacata	tcttctatga	cctggaaccc	540
attttagggc	ttgcttgctc	agacacccaa	atcaacaact	tgataattac	tgccattggg	600
gaagtagtta	tcttcatccc	ctttaccttc	acattcttgt	ctcctatggc	cttattggca	660
gcactatgct	tggagttcca	tcagccaagg	ggaagtagaa	aacattctct	acatgtgggt	720
cccactcttc	agttgtgccc	caggtcttct	atgggttcac	cattggagtc	tactttctct	780
ccttttttgc	ctactcagca	gaaagggatg	aggtagctgc	tatcatgtat	acaactgtaa	840
ctcacttgat	caaatacttt	atctgtatgc	taaggaaacga	ggacatgaaa	ggagcactga	900
ggagaccact	cagcagacaa	ggtttttctg	gagtgggtgag	c		941

<210> 247

<211> 941

<212> DNA

<213> Unknown (H38g96 nucleotide)

<220>

<223> Synthetic construct

<400> 247

atgatgaaga	agaaccaaac	catgatctca	gagttcctgc	tcttgggcct	tccatccaac	60
ctgagcagcg	gaatctgttc	tatgccttgt	tcttggccgt	gtatcttacc	acctctctgg	120
ggaacctcct	cgtcattgtc	ctcattcgac	tggactccca	cctccacatg	cctatgtatt	180
tgtgtctcag	caacttgctc	ttctctgacc	tctgcttttc	ctcgggtcaca	atgccccaaat	240
tgctgcagaa	catgcagagc	caaaacccat	ccatccccct	tgcggactgc	ctgggtcaga	300
tgtactttca	tctgttttat	ggagttctgg	agagcttccct	ccttgtgggtc	atgggttata	360
actgctatgt	ggctatttgc	tttctctctg	actacaccac	tatcatgagc	cccaagtgtt	420
gccttggctc	gctgacactc	tcttggctgt	tgaccactgc	ccatgccacg	ttgcacacct	480
tgcttatggc	caggctgtcc	ttttgtgctg	agaatgtgat	tcctcacttt	ttctgtgata	540
catctacctt	gttgaagctg	gcctgctcca	acacgcaagt	caatgggtgg	gtgatgtttt	600
tcattggcgg	gctcatcctt	gtcatcccat	tcctactcct	catcatgtcc	tgtgcaagaa	660
tcgtctccac	catcctcagg	gtcccttcca	ctgggggcat	ccagaaggct	ttctccacct	720

gtggccccca	cctctctgtg	gtgtctctct	tctatgggac	aattattggt	ctctacttgt	780
gccattgac	gaatcataac	actgtgaagg	acactgtcat	ggctgtgatg	tacactgggg	840
tgaccacat	gctgaacccc	ttcatctaca	gcctgaggaa	cagagacatg	agggggaacc	900
ctgggcagag	tcttcagcac	aaagaaaatt	tttttgtctt	t		941

<210> 248

<211> 994

<212> DNA

<213> Unknown (H38g97 nucleotide)

<220>

<223> Synthetic construct

<400> 248

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ccgggactcc	aggccccgt	cttcttccctg	tttctaggtt	tctacgcggt	cacgggtggtg	120
gggaacctgg	gcttgataat	cctgataggg	ctcaactctc	gcctgcatat	ccccatgtac	180
tttttccctt	tcaacttgtc	cctcgtagat	tttagtttct	ctacgacct	cattcccaaa	240
atgctgatga	gttttgtctc	aaggaagaac	attatttcct	tcacagggtg	tatgagtcag	300
ttcttcttct	tctgtttctt	tgtcttttct	gagtccttca	tcctgtcggc	gatggtgtag	360
gaccgctacg	tgggcatctg	taaccactg	ttgtacacga	tcaccatgtc	tccccagggtg	420
tgtttgcctc	ttttactggg	tgtctacggg	atgggggttt	ttggggctgt	ggctcataca	480
ggaaatatag	tgtttctcac	cttttgtgca	gacaaccttg	tcaatcacta	catgtgtgac	540
atccttcccc	ttcttgagct	ctcctgcaac	ggctcttaca	taaagtctct	ggtcattctt	600
attgttgtga	ccgttggcat	tggggtgccc	attgttgccg	tttttatctc	ttatgggttt	660
attctttcca	gcattctccg	cgttagtctt	gctgagggca	ggctctaaagc	cttcagtagc	720
tgcagctcct	acataattgc	agtttctctt	ttctttgggt	caggagcttt	tacgtacctc	780
aaacccccct	ccattttacc	cctggaccag	gggaaagtgt	cctccctgtt	ctataccact	840
gtggtgcccc	tgtttaaccc	attaatctac	agcctgagga	ataaggatgt	caaacttgcc	900
ctgaagagaa	ccttttccag	aataagcttt	tcttgaaaaa	aatttttagaa	acagaaaaaga	960
gatactagga	tttttttaaa	atcagattgc	tttt			994

<210> 249

<211> 942

<212> DNA

<213> Unknown (H38g98 nucleotide)

<220>

<223> Synthetic construct

<400> 249

atgtcgaatg	aggacatgga	acaggataat	acaacattgc	tgacagagtt	tgtttctcaca	60
ggacttacat	atcagccaga	gtggaaaaatg	cccctgttct	tggtgttctt	ggtgatctat	120
ctcatcacta	ttgtgtggaa	ccttgggtctg	attgctctta	tctggaaatga	cccacaactt	180
cacatcccca	tgtacttttt	tcttgggagt	ttagcctttg	ttgatgcttg	gatattcttcc	240
acagtaactc	ccaaaatgtt	ggttaatttc	ttggccaaaa	acaggatgat	atctctgtct	300
gaatgcatga	ttcaattttt	ttcctttgca	tttgggtggaa	ctacagaatg	ttttctcttg	360
gcaacaatgg	catatgatcg	ctatgtagcc	atatgcaaac	ctttactata	tccagtgatt	420
atgaacaatt	cactatgcat	acggctgtta	gccttctcat	ttttagggtg	cttctcccat	480
gccttaattc	atgaagtcct	tatattcaga	ttaaccttct	gcaattctaa	cataatacat	540
catttttact	gtgatattat	accactgttt	atgatttctt	gtactgacct	ttctattaat	600
tttctaattg	tttttatttt	gtctggctca	attcaggtat	tcaccattgt	gacagttctt	660
aattcttaca	catttgcctt	tttcacaatc	ctaaaaaaga	agtctgttag	aggcgtaagg	720
aaagcctttt	ccacctgtgg	agcccatctc	ttatctgtct	ctttatatta	tggcccaact	780
atcttcatgt	atttgcgccc	tgcatctcca	caagcagatg	accaagatat	gatagactct	840
gtcttttata	caatcataat	tccttttgta	aatccccatta	tctacagtct	gagaaataaa	900
caagtaatag	attcattcac	aaaaatggta	aaaagaaatg	tt		942

<210> 250

<211> 939

<212> DNA

<213> Unknown (H38g99 nucleotide)

<220>

<223> Synthetic construct

<400> 250

atggagggga	aaaatctgac	cagcatctca	gaatgtttcc	tcctgggggt	ctctgagcag	60
ctggaggagc	agaagcccct	ctttgggtcc	ttcctgttca	tgtacttggt	cacggtgga	120
ggcaacctcc	tcatacttct	agtcattcatt	actgacactc	aactccatac	ccccatgtac	180
ttctttctag	ccaacctctc	ccttgcagat	gcctgctttg	tgtccaccac	agtccctaag	240
atgctggcaa	acatacagat	ccagagtcag	gccatctcct	actcagggtg	tctactacag	300
ttgtattttt	tcattgttatt	tgtgatgctg	gaggcattcc	tcttggcggt	catggcctat	360
gactgctacg	tggccatatg	ccaccacttt	cattacattc	tgatcatgag	ccctgggctc	420
tgcactctcc	tcgtgtctgc	atcctggatc	atgaatgccc	tccactccct	tctacacaca	480
cttctgatga	acagcctgtc	cttctgcgca	aaccatgaga	tcccacactt	cttctgtgac	540
atcaatcccc	tcctgagtct	gtcctgcaca	gaccccttca	ccaatgagct	gggtgacttc	600
atcactgggg	gtctcacagg	actcatttgt	gtgctttgcc	tgattatctc	ttacacgaac	660
gtttttcgca	ccatcctgaa	gatcccatca	gctcagggga	agcggaaagc	cttttccacc	720
tgcagctctc	atctctccgt	ggctctcttc	ttctttggga	cttctttttg	tgttgatttc	780
agttctccct	caaccactc	ggcccagaag	gacacagttg	catcagtgat	gtacacagtg	840
gtaactccaa	tggtgaatcc	ctttatctac	agtttgagga	accaagaaat	aaagtcttcc	900
ctgagaaagt	taatctgggt	tcggaaaatt	cattccccct			939

<210> 251

<211> 931

<212> DNA

<213> Unknown (H38g100 nucleotide)

<220>

<223> Synthetic construct

<400> 251

atggaagagg	aaaatgcaac	attgctgaca	gagtttggtc	tcacaggact	tttatatcaa	60
ccacagtggg	aaatacccct	gttcctgaca	ttcttggtaa	tatatctcat	caccatcatg	120
gggaatcttg	gtctgattgc	tgtcatctgg	aaagaccctc	accttcagat	cccaatgtac	180
ttactcctcg	ggaatttagc	ttttgtagat	gcttggatat	catctacagt	gactccaaag	240
atgctgaata	acttcttagc	taagagtaag	atggatatctc	tgcctgaaag	caaaatacag	300
tttttttcgt	ttgcaatcag	tgtaaccact	gaatgttttc	tcttggcaac	aatggcatat	360
gatcgctatg	tagccatatg	caaaccctta	ctttatccag	ccattatgac	caatggactg	420
tgcateccgg	tatgtagggt	gtcttcttca	tgctttaatc	catgaaggat	ttttattcag	480
actaaccttc	tgtaactcca	acgtagtaca	ccacatttac	tgtgacatta	tcccattgtc	540
taagattttc	tgtactgatt	cttctattaa	ttttctaatg	gtttttatct	tctcagggtc	600
aattcaagtt	ttcaccattg	ggactggctc	tatatcttat	acatttgctc	tctttacaat	660
cttgaaaaag	aaatctgtca	aaggataaag	aaaagccttc	tccacctgtg	gagctcatct	720
cttatctgta	tctttatacc	atgggcccct	cgacttcatg	tatatgggct	ctgcatcccc	780
acaggetgat	gacgaagaca	tgatggagtc	tctattttac	actgtcatag	ttcctttatt	840
aaatcccatg	acctacagcc	tgagaaacaa	acaagtaata	gcttcattca	caaaaatggt	900
caaaagaaat	aatatttaga	tctcttactc	a			931

<210> 252

<211> 690

<212> DNA

<213> Unknown (H38g101 nucleotide)

<220>

<223> Synthetic construct

<400> 252

ttctgtttgt	tcccagccac	agtctccaag	gcagtggtga	aatttttggc	agagacaatt	60
tcctttctct	attatgtgat	acaaatgctg	gtatttttgt	tctttgtgac	tactgaatgc	120
aatcttttag	cctccctggg	caaggacatt	tatatgcca	tcagacaacc	catgctctat	180

cctgtcacta	tgteccaagt	ttgttgatc	caattagtagg	cttcatgtta	cgggcatgga	240
gttatccata	ctatgttttt	aggaggttca	atctctatat	ttgccttttg	taagttcaaa	300
ccatcatcag	cttttttggt	gacagtttcc	cactcttggt	cctctcctgc	tcagacacct	360
acataatgaa	ttctttgttc	tttttctactg	gggtgcttcat	ttggatgagc	tcttgaccag	420
tcacccctgt	ctcccacatg	ttcatcattg	tcactttctt	gaggatcttc	tcagttgtag	480
ttgaatctaa	agggttttctt	gcttttttctt	cacatctaac	tgctatcatt	ctcttctatg	540
gggacattat	atttatatat	gtgacattct	tccaactatt	ttctgaacca	agaccagact	600
gtatccattt	tctacatggt	aagaattctt	ttgttaagcc	ccattatcta	ttgtttaata	660
aaaatgcaag	tgatttggtt	tcttgaaaat				690

<210> 253

<211> 647

<212> DNA

<213> Unknown (H38g102 nucleotide)

<220>

<223> Synthetic construct

<400> 253

cttttttttt	ttgtctgaca	cagcctcctg	acctgatagg	aaggagtaaa	agaaatttgg	60
tactttcagg	aatttctgac	atatccaaga	catagaaact	cctgtttgtc	tcttccctgca	120
tgtattatcc	ctcaagaatt	ttcctaagga	ggacagtaaa	cattctatctt	ctgcttaagg	180
ttatctcatt	gctttgttat	gggtcaaaac	tcagtttggt	catttttgggt	gttactgcag	240
aatttttagct	tttggcctcc	aggatctgcc	attgctatat	tattatttgt	aaccctattct	300
ctacccaatt	ctcacattaa	aagctttttaa	tttcaattct	gacggctcat	tacaataaga	360
gagtatgtat	ttcaataaca	acatcaaaca	ctatgtctta	gctcttcttt	ggcagatcca	420
atgtggtgaa	caacttctct	gatcttctct	tgctcttaga	tttatcctgc	acatttgtga	480
gtttctgac	tccatctcag	cttctgtatc	atagtcctgg	tcccataat	tttatcattg	540
tggtcaatat	aaagatttag	ttagctgaag	ggaagcaca	agacttctct	atctgtccat	600
tataatttgc	tactgtcagc	aatttttttaa	tggcacacat	acatatt		647

<210> 254

<211> 936

<212> DNA

<213> Unknown (H38g103 nucleotide)

<220>

<223> Synthetic construct

<400> 254

ttcatggaaa	ataggaatat	tgctactgtc	tttattctcc	tgggactttc	tcaaaacaag	60
aacattgaag	ttttttgggt	tgtattatct	gtattttgct	acattgctat	ttggatggaa	120
aacttcatca	taatgatctt	tatcatgtac	atttagctaa	ttgaccaacc	catgtatttc	180
ttccttaatt	acctcgcact	ctcagatctt	tgctacatat	ccactgtggc	ccccagcta	240
atgattgacc	tactaacaga	aaggaagatc	gtttcctata	ataactgcat	gatacagcta	300
tttatcactc	acttcccttg	agacattgag	atcttcatac	tcaaagcaat	ggcctatgac	360
cactacatag	ccatctgcaa	gcacctgcac	tacaccatca	tcacgaccaa	gcaaagctgt	420
aacaccatca	tcatagcttg	ttgtactggg	ggattttatac	actctgccag	tcagtttctt	480
cttaccatct	tcttaccgtt	ctgtgggtct	aatgagatag	atcagtactt	ctgctatgtg	540
tatcctctgc	tgaagtggc	tcgcattgat	atatacagaa	ttggtttctt	ggtaattgtt	600
aattcaggcc	tgatttcttt	gttggctttt	gtgattttga	tggtgtctta	ttatttgata	660
ttatccacca	tcaggggtta	ctctgctgag	agtcatacca	aagctctttc	aacctgtagc	720
tctcacataa	tagttgtggg	cctattcttt	gtgcctgccc	tcttcattta	catcagacca	780
gccataactt	ttccagaaga	taaagtgttt	gttctcttct	gtgccatcat	tgctcccatg	840
ttcagtcttc	ttatctacat	gctgagaaag	gtggagatga	agaacgctgt	aaggaaaatg	900
tggtgtcatc	aattgcttct	ggcaaggaag	taactt			936

<210> 255

<211> 924

<212> DNA

<213> Unknown (H38g104 nucleotide)

<220>

<223> Synthetic construct

<400> 255

atggccatgg	acaatgtcac	agcagtggtt	cagtttctcc	ttattggcat	ttctaactat	60
cctcaatgga	gagacacggt	tttcacatta	gtgctgataa	tttacctcag	cacattgttg	120
gggaatggat	ttatgatctt	tcttattcac	tttgacccca	acctccacac	tccaatctac	180
ttcttcttta	gtaacctgtc	tttcttagac	ctttgttatg	gaacagcttc	catgccccag	240
gctttgggtg	attgtttctc	tacccatccc	tacctctctt	atccccgatg	tttgggtcaa	300
acgagtgtct	ccttggtctt	ggccacagca	gagtgcctcc	tactggctgc	catggcctat	360
gaccgtgtgg	ttgctatcag	caatcccctg	cgttattcag	tggttatgaa	tggtccagtg	420
tgtgtctgct	tggttgctac	ctcatggggg	acatcacttg	tgctcactgc	catgctcatc	480
ctatccctga	ggcttcactt	ctgtggggct	aatgtcatca	accattttgc	ctgtgagatt	540
ctctccctca	ttaagctgac	ctgttctgat	accagcctca	atgaatttat	gacccctcatc	600
accagtatct	tcacctgtct	gctaccattt	gggtttgttc	tcctctccta	catacgaatt	660
gctatggcta	tcataaggat	tcgctcactc	cagggcaggc	tcaaggcctt	taccacatgt	720
ggctctcacc	tgaccgtggt	gacaatcttc	tatgggtcag	ccatctccat	gtatatgaaa	780
actcagtcca	agtcttacct	tgaccaggac	aagtttatct	cagtgtttta	tggtgctttg	840
acacccatgt	tgaaccccct	gatatatagc	ctgagaaaaa	aagatgttaa	acgggcaata	900
aggaaagtta	tgttgaaaag	gaca				924

<210> 256

<211> 971

<212> DNA

<213> Unknown (H38g105 nucleotide)

<220>

<223> Synthetic construct

<400> 256

atggaagcag	aaaaccttac	agaattatca	gaattcctcc	tcttaggact	ctcagatgat	60
cctgaactgc	agcccgctct	ctttgggctg	ttcctgtcca	tgtacctggt	catgggtgctg	120
gggaacctac	tcatcatcct	ggccgtcagc	tctgactccc	acctccacag	ccccatgtaa	180
ttcttctctt	ccaacttgct	ctttgtggac	acctgtttca	tctgcaccac	agtccccaag	240
atgctagtga	acatccaggc	acggagcaaa	gacatctcct	acatgggggtg	cctcactcag	300
gtgtattttt	aaatgatgtt	tgctggaatg	gatactttcc	tactggctgt	gatagcctat	360
gaccggtttg	tggccatctg	ccaccactg	cagtacatgg	tcatcataaa	cccccatctc	420
tgtggcctcc	tggttctggc	atcttggttc	atcattttct	ggttctccct	ggttcatatt	480
ctactgatga	agaggctgac	cttctccaca	ggcactgaga	ttccgcattt	cttctgtgaa	540
ctggctcagg	tcctcaaggt	ggcccgtctt	gatgctctcc	tcattaacat	tgtcttgtat	600
gtggccacgg	cactgctggg	tgtgtttcct	gtagctggga	tcctcttctc	ctactctcag	660
attgtctcct	ccttaatgag	aatgtcctcc	accgagggca	agtacaaagc	cttttccacc	720
tgtggatctc	acctctgtgt	ggtctccttg	ttctatggaa	caggacttgg	ggctctatctg	780
agttctgctg	tgaccatttc	ttcccagagc	agctccatgg	cctcagtgat	gtacgccatg	840
gtcaccacca	tgctgaacct	cttcatctac	agcctgagga	acaaggatgt	gaagggggcc	900
ctggggagac	tccttagcag	ggcagcctct	tgtctcttac	ggtacacaac	ctcagaacta	960
agaggatgct	a					971

<210> 257

<211> 873

<212> DNA

<213> Unknown (H38g106 nucleotide)

<220>

<223> Synthetic construct

<400> 257

atggaggggt	tcaactattc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agatattctt	ttctgtgggt	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtccta	tccacctcac	accttcactc	tcgcatgtac	180

ttcctgctca	gcaacatgct	tcattgacat	gtgcctgtcc	tcctttgcca	caccaaagat	240
gattatggac	ttttttgctc	tgcgtaacac	catctccttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ttgatctcca	tgtcttttga	360
caggtatatt	gccatatgta	aacctctcca	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttggtggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttccttttg	tcattccagtt	agcttgatata	gatattttatg	ttcttgggac	ctccatgatt	600
tcaaccagtg	gtgtgattgc	tcttataagt	tttctgcttt	tgctcacctc	ctacatcatt	660
gttctttaata	ttgtcagga	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcgcatt	ttattgttgt	gttaatgttc	tttggggcct	gtattttcat	ttatgtgtgg	780
ccttccacaa	acttctgtgt	agacaaaatt	ctctccgttt	tctataccat	cttcaactccc	840
tttctgaatc	cacttatcta	tactttgaga	aac			873

<210> 258

<211> 985

<212> DNA

<213> Unknown (H38g107 nucleotide)

<220>

<223> Synthetic construct

<400> 258

tacacagagc	cacagaatct	cacaggtgtc	tcagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctggg	ctgttcctgt	ccatgtacct	ggtcacgggtg	120
ctggggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttggct	gacatcggtt	tcacctccac	cacgggtcccc	240
aagatgattg	tggacatgca	aactcacagc	agagtcacct	cctatgaagg	ctgcctgact	300
cagatgtctt	tttttgtcct	ttttgcatgt	atggatgaca	tgctcctgag	tgtgatggcc	360
tatgaccggt	ttgtggccat	ctgtcacccc	ctgcactacc	gaatcatcat	gaacccacgc	420
ctctgtggct	tcttaatctt	gttgtctttt	tttattagtc	ttttggactc	ccagttgcac	480
aatttgatta	tgttacagct	cacctgtctc	aaggatgtgg	acatttctaa	tttcttctgt	540
gacctttctc	aactcctcca	ccttaggtgt	tccgacacct	tcataaatga	aatgggtcata	600
tatttcatgg	gtgccatatt	tggctgtctc	cctatctcag	ggatcctttt	ctcttactat	660
aaaattgttt	ccccattctc	gagagtccca	acatcagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttgtttgc	ttattttatg	gaacaggggt	tgtagggtac	780
ctcagttcag	ctgtgttacc	atcccccagg	aagagtattg	tggcttcagt	gatgtacact	840
gtggtcaccc	ccatgctgaa	ccccttcac	tacagcctga	ggaacaagga	cattcaaagt	900
gcctgtgca	ggctgcatgg	cagaatcatc	aaatctcatc	atctccatcc	tttttgttat	960
atgggataga	aatggcagca	aaatt				985

<210> 259

<211> 976

<212> DNA

<213> Unknown (H38g108 nucleotide)

<220>

<223> Synthetic construct

<400> 259

ctcaccatgc	cacacctcag	caacaccaca	tctgagttcc	caatcttctc	cctaacaggc	60
ttccctgggc	tggaggcctt	ccacatctgg	atctcaattc	ccttcttctc	tctgagcaca	120
gttgctctct	tagggaacag	catgatccta	ttggttgtta	ttctggagcc	aaacctccat	180
gaacccatgt	actgttttct	cttcatgctg	tctgccgtcg	acctggggct	gacctctctc	240
acaatgcca	cgacctcag	tgctctctgg	ttcagtgcac	gtgaaatcat	cctcaatgca	300
tgtatcatcc	agctcttttt	cctccacagc	tctggcttta	tggaaatcctc	agtactgatg	360
gccatggctt	ttgaccgctt	tgttgccatt	tgcagacccc	tcagatatgc	taccatcctg	420
acagactcca	gaattctaaa	gattgggtga	gcaatagtcc	taagaacatt	gatcagcctc	480
ttcccatccc	tctttctcat	taagagactg	tcattttgca	aagtcaatgt	cctttcccat	540
tcttactgct	tccaccctga	tgcgcttaaa	gttgcatgtt	ctgattcaag	gatgaacagc	600
tatggaggct	tagctgttct	cattctgggtc	accgggggtg	gtacaccatg	tgttgcgctt	660
tcctacatcc	tgataatcca	ctctgtacta	aacatcatct	cttcagaggg	acggaggaag	720

gccttcgaca	cttgtggatc	tcacattggg	gcagttgcag	tcttctacat	tccctgggtt	780
gttcttttcag	ttgtccacag	atttttccac	aaggcttcac	caatatgtcc	acccactatt	840
gtccaacatc	tatttccttg	gccccctctc	gctgaacccc	atcatatata	gtgtgaagac	900
taaacaaatc	cgcagggtcta	tcctcaaact	ctttcaaaca	aaatcaaaa	aaatgtaatg	960
ggggcttttc	ttcctg					976

<210> 260

<211> 884

<212> DNA

<213> Unknown (H38g109 nucleotide)

<220>

<223> Synthetic construct

<400> 260

atccaatgca	agggctaata	gaagtgaatt	aagacattct	ctgtaactcc	aatattaaat	60
ggaaccggg	aaatagccag	attcctctcc	aacctgtcct	tggctggcat	cggtttcccc	120
tccaccatag	tctccaagat	gattgtggac	atccagtctc	acagcagagt	catctcctat	180
gcgggctgcc	tgactcaggt	atctcttttt	gccgtttttg	gatgcatgga	agacatgctt	240
ctgagtgtga	tggcttatga	ccggtttgtg	gacatctgtc	accctctgga	ttatccagtc	300
atcatgaacc	catgtttctg	tggcttccta	gttttgttgt	ctttttttct	cagtctttta	360
gactcccagc	tgcaaatg	gattgcctta	caaattacct	gcttcaagga	tgtggaaatt	420
cccaatttct	tctgtgaccc	ttctcaacac	cccacccttg	cctgttgtga	caccttcacc	480
aatgacatag	tcatgtattt	ccttgctgcc	atatttgggt	ttcttcccat	ttcggggacc	540
ttttcatctt	actataaaat	tgtttccctc	attctgaggg	tttcatcatc	aagtgggaag	600
tataaagcct	tctccacctg	tggctctcac	ctgtcagttg	tttgcttatt	ttatggaaca	660
ggctttggag	gggacctcag	ttcagacatg	tcctcttata	ccagaaaagg	tgcagtggcc	720
tcagtgatgt	acacggtggg	tactcccatg	ctgaacccct	tcatctacag	cctaacaggg	780
aaattaaaag	tgccctgcgg	cagctgcact	gcagaatagt	ctaattctcat	tttcttatta	840
tctgttccat	tccttccgta	gtgtgagtta	gaaaaggcag	caag		884

<210> 261

<211> 959

<212> DNA

<213> Unknown (H38g110 nucleotide)

<220>

<223> Synthetic construct

<400> 261

tacacagact	cgcagaatct	cacagggtgtc	ttagaatttc	tcttccctggg	actctcagag	60
gatccagaac	tgcagcccgt	cctcggttggg	ctgttccctgt	ccatgtacct	gatcacgggtg	120
ctggggaaacc	tgctcatcat	cctggccgtc	agctgtgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaactt	gtccttgggt	gacatcggac	tcacctctgc	caccatccct	240
aagatgattg	ttgatatgca	atctcacagc	agaatcatct	cctatgaggg	ctgcctgatg	300
cagatgtctt	tatctatatt	gtgtgtatga	atgacatggg	cctgactgtg	atggcctatg	360
accagtttgt	ggccatttgt	cacccccctac	gctacccagt	catcatgaat	ccccatctct	420
gtgtcttctt	agttttgggt	tcttttattc	ttagcctgtt	gaactcccag	ctgcacaatc	480
agattgtgtt	acaattcacc	tgtttcaaga	atgtggaaat	ctttaatttt	ttctgtgagc	540
catctcaact	tctcaacctt	gcctgttctg	acagtgtcat	caataacata	ttcatgtatt	600
tagatagtgt	tattttgggt	tttcttccca	tctcagggat	ccttttgtct	tactataaaa	660
ttgtctcctc	cattctaaga	attccatcat	cagatgggaa	gtataaaagg	ttctccacat	720
gtggctctca	cctggcaggt	gtttgcttat	tttatggaa	aggacttgga	gcctacctca	780
gttcagctgc	gtcctctttc	cccaggaagg	gtgcggtcac	ctcagtgatg	tacactgtgg	840
tcatccctat	gctgaacccc	ttcatctaca	gcctgagaaa	cagggacatt	aaaagtgcc	900
tgtggaggct	gcacagcaga	acagtcta	ctcattatct	gttccatcct	ttctgtagt	959

<210> 262

<211> 955

<212> DNA

<213> Unknown (H38g111 nucleotide)

<220>

<223> Synthetic construct

<400> 262

cacacagagc	cacagaatct	cacagggtgc	tcagaattcc	tctctctggg	actctcagag	60
gatccagaac	tgcagccact	ccttgctggg	ctgttcctat	ccatgtgcct	ggtcacgatg	120
ctggggaacc	tgtcatcat	cctggccgct	agccctgact	cccacctcca	catccccatg	180
tactttcttc	tctccaacct	gtccttgcc	gacattggtt	tcaccttggc	cacgggtcccc	240
aagatgattg	tagacatgca	atcacatagc	agagtcactc	cccatgcagg	ctgtctgaca	300
cagataccct	tctttgtcct	ttttgtatgt	atagatgaca	tgctcctgac	tgtgatggcc	360
tatgactgat	ttgtggccat	ctgtcacccc	ctgcactacc	cagtcacat	gaatcctcac	420
ctctgtgtct	tcttagtggt	gatgtctttt	tccttagcct	gttggattcc	tagctgcaca	480
actggattgt	tacaattcac	ctgcttcaag	aatgtggaaa	tctctaattt	tttctgtgac	540
tgatctcaac	ttctcaacct	tgccgtgtct	gactgtcatc	agtaacatat	tcatacatct	600
agatagtact	atatttggtt	ttcttcccat	ttcagggtac	cttttgtctt	actataaaaat	660
tgtgccctcc	attctaagaa	ttccattgtc	agatgggaag	tataaagcct	tctccacctg	720
tggctctcac	ctggcaattg	tttgcttatt	ttatgggaaca	ggcattggca	tgtacctgac	780
ttcagctgtg	tcaccagccc	ccaggaatgg	tgtggtggca	tcagtgttgt	acgctatggt	840
cacccccatg	ctgaacccct	tcactctgcag	cctgagaaac	aggggcattc	aaagtgcctt	900
gtggaggctg	tgcaggagga	aagtctaate	tcatgatctg	tttcatcctt	tttct	955

<210> 263

<211> 1049

<212> DNA

<213> Unknown (H38g112 nucleotide)

<220>

<223> Synthetic construct

<400> 263

atgtcccaac	tgggaaggga	caacataacc	tgggtgagtg	agttcactct	aatgggtctc	60
tccagtgaca	ggcagaccca	ggctggactc	tttatcttat	ttggggctgc	ctacctgctg	120
accctgctgg	gcaatgggct	cactctgctc	ctgatctggc	tggacgtgag	actccacctg	180
cccatgtatt	tcttctctcg	caacctctca	cttgtgaaca	tctgctacac	ctccagcagg	240
gtccctcaga	tgctgggtgca	ctgcaccagc	aaagaaagac	catctccttt	gcccgatgtg	300
ggaccacagc	ctttttctcc	ctggccctcg	gggggaccga	gtttttgttg	ctggccgcaa	360
tggcctatga	ccgctacgtg	gctgtttgcg	acccctctgt	ttacatagca	gtgatgagcc	420
caaggctctg	catggcactg	gcagctgtct	cttggctagt	gggcctggct	aattctgcta	480
tggagacggc	actgaccatg	cacctgcccc	cctgtgggca	caacgtgctg	aacctatgtg	540
cctgtgagac	actggcactg	gtcaggctcg	cctgcgtgga	catcaccttc	aatcagggtg	600
tcatagtggc	ctccagtgtg	gtggtgctgc	tgggtgccctg	ctgcctggct	tcgctgtcct	660
acaccctcat	tgtagtgtgc	gtcctgcaga	tccactccac	ccaggggcac	cgcaaggcct	720
ttgggacctg	tgcctccccc	ctcactgtgg	tctccatatc	ctatgggatg	gccctcttta	780
cctacatgca	gcctcgctcc	atggcctcag	ctgagcagga	aaaggatgat	gtactctctt	840
atgctgtggt	gacccccatg	ttgaatcctt	tcactctacg	tctgcggaac	aaggatgtga	900
aggcagctct	gagtcgagct	ctgatgagga	gctctgaatt	aaaacattag	agagtgggtt	960
gagtaacaag	aaggcctcac	tctgaaaaca	gtgggcattg	gactgtgctc	tccagtataa	1020
cgtgtgtacg	catgtgtgtg	tatgtgtgt				1049

<210> 264

<211> 955

<212> DNA

<213> Unknown (H38g113 nucleotide)

<220>

<223> Synthetic construct

<400> 264

atggacagtc	ccagcaatgc	caccgtgccc	tgtggctttc	tccttcaagg	cttctccgaa	60
ttcccgcacc	tgagaccggt	gctcttcctt	ttgctgctgg	gggtgcacct	ggccaccctg	120

ggcggaacc	tgctcactct	ggtggccgtg	gcctcgatgc	caagccggca	gccccatgctg	180
ctcttctgt	gccagctgtc	agccatcgag	ctgtgctaca	cgctgggtgg	ggtgccccgc	240
tccctggctg	acctgagcac	gccggggcca	ccgcaggggc	agccctatct	ccttccctgag	300
ctgcgctttt	cagatgcaga	tgtttgtggc	tctggggggg	gccgagtgtc	tcttgcctggc	360
cgccatggct	aatgaccgct	acgtggccat	ctgccaccgc	ttgcgctacg	cgccgtgggtg	420
acccccgggc	tgtgcgcgcg	actggctctg	gctgctgcct	caggggactg	gcggtgtcgt	480
ggggctcacg	gtgccatctt	ccacctgcct	ttctgcggtc	cccgcctgct	gctgcacttc	540
ttctgcgaca	tcacggcgct	gctgcacctg	gcctgcacgc	ggactacgcc	gacgagctgc	600
ctctgctggg	cgctgcctg	gtgctgctgc	tgtgcccctc	ggtgctcctc	ctggcctcct	660
atggcgccat	cgccggcgcc	ctggccgcct	gcgtgcccc	aaaggccggg	gcaaggccgc	720
ctccacctgc	gccttgacc	tggcagtcac	cttccctgac	tacggctgcg	ccaccttcat	780
gtacgtgctg	cccagggcca	gctactcccc	gcgcctggac	cgcacctggg	cgctggtcta	840
caccaacgtc	acgcgcgtgc	tgtgcccact	catctacagc	ctgcgcaacc	gcgagatcac	900
cgccgccttg	agcagggtgc	tggggcgccg	gcggccaggc	caagctccag	gcggg	955

<210> 265

<211> 945

<212> DNA

<213> Unknown (H38g114 nucleotide)

<220>

<223> Synthetic construct

<400> 265

atgggagact	ggaataacag	tgatgctgtg	gagcccatat	ttatcctgag	gggttttctc	60
ggactggagt	atgttcattc	ttggctctcc	atcctcttct	gtcttgcata	tttggttagca	120
tttatgggta	atgttaccat	cctgtctgtc	atttggatag	aatcctctct	ccatcagccc	180
atgtattact	ttatttccat	cttagcagtg	aatgacctgg	ggatgtccct	gtctacactt	240
cccaccatgc	ttgctgtgtt	atggttggat	gctccagaga	tccaggcaag	tgcttgcctat	300
gctcagctgt	tcttcaccca	cacattcaca	ttcctggagt	cctcagtgtt	gctggccatg	360
gccttttgacc	gttttgttgc	tatctgccat	ccactgcact	acccaccat	cctcaccaac	420
agtgttaattg	gcaaaattgg	tttggcctgt	ttgctacgaa	gcttgggagt	tgtacttccc	480
acacctttgc	tactgagaca	ctatcactac	tgccatggca	atgccctctc	tcacgccttc	540
tgtttgcacc	aggatgttct	aagattatcc	tgtacagatg	ccaggaccaa	cagtatttat	600
gggcttttgtg	tagtcattgc	cacactagggt	gtggattcaa	tcttcatact	tctttcttat	660
gttctgatcc	ttaatactgt	gctggatatt	gcactctcgtg	aagagcagct	aaaggcactc	720
aacacatgtg	tatcccatat	ctgtgtgggtg	cttatcttct	ttgtgccagt	tattgggggtg	780
tcaatggctc	atcgcttttg	gaagcatctg	tctcccatag	tccacatcct	catggcagac	840
atctaccttc	ttcttcccc	agtccttaac	cctattgtct	atagtgtcag	aacaaagcag	900
attcgtctag	gaattctcca	caagtttgtc	ctaaggagga	ggttt		945

<210> 266

<211> 869

<212> DNA

<213> Unknown (H38g115 nucleotide)

<220>

<223> Synthetic construct

<400> 266

tttcatggct	ggatttccat	gcccttttgc	tgtatttact	tgatgcctct	gctgagcaat	60
gctacaattc	tactgacaat	ctggctctgat	cgtactcttc	gggaccctat	gttctacttt	120
ctagccatct	tatcagccat	agacctagcc	ctctcaacat	cctcagtgcc	tcgtatgttg	180
ggtatcttct	ggtttgatgc	acataaaaatt	ggctttggag	cctgggtagc	ccagatgttt	240
ctgatacaca	ctttcacagg	aatggagtc	actgtgctgc	tggcaatggc	ctttgaccgc	300
tatgtggcca	tctgtacatc	actccactat	acctctactc	tgacaccccg	agtattggca	360
ggcattgggtg	tgagcattat	aatgcgcccc	gtcctgctca	tgttgcccat	tctctaccta	420
acccatgcgc	tgcccttctg	tgaggctcgg	attattgccc	actcctactg	tgagcacatg	480
ggatttgcta	agttggcctg	tgctagcatt	cacatcaatg	ctattttatg	gctttttgtg	540
gcttcttatt	ttggatgtcg	cacttggttg	aatctcctat	acctacattc	tccgagctgt	600
tttccacctc	ccatctcaag	acgctcgtca	caaagcactg	agaacgtgtg	gctcacatgt	660

tgggggtcatg	tgtgttttct	atacaccctc	cctctttctcc	ttcctcacct	accgatttcg	720
caaaaaaaaaat	tccccgttat	gtccacattc	ttgttgccaa	cctctatgtg	gtcattccac	780
ctgccctcaa	tcctattatc	tatgggtgtga	gaaccaaaca	gattcatgag	catgtgggtcc	840
atactttcac	ctcaaagtaa	ggtctctta				869

<210> 267

<211> 520

<212> DNA

<213> Unknown (H38g116 nucleotide)

<220>

<223> Synthetic construct

<400> 267

acatgctggg	ttttgatggt	gaacgtgggtg	aatgcctaca	cctgaggact	atcaggagcc	60
actttcaaca	ccatctgcac	atttgccgc	ttcttctgtg	atgacaatta	gatcaaattc	120
tgtcacatcc	tgccctgct	gaagctcatt	tgaaatactt	caggaaacag	caagataatt	180
attgtgatct	ttgacagctt	ttatgattat	agctggcact	agggtcatec	tgatctctta	240
cctgctaata	atcagggtct	tgaggatgaa	atcatcgagt	ggcaaagcca	ataattttat	300
ccatccactt	gtgcctccca	cctaactgct	atgaccttcc	tttgggatcc	ccatcttcag	360
acatgtgaag	tacctcagat	aaatcactga	cagaagacaa	gttggcatca	tgacttgcac	420
catctttatt	cctatgctag	aacttttgat	ccaaagtcta	aagaaggata	tacaagttgc	480
cttcaaaaag	gccataggta	acttctgggt	ttttgagagg			520

<210> 268

<211> 952

<212> DNA

<213> Unknown (H38g117 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(952)

<223> n = A,T,C or G

<400> 268

attagcacia	tgtctgtctt	caaaagtctt	gcataaaacc	ctcgcttcct	ccaaacgggc	60
ctctcaggcc	ttgaaagcag	atatgacttg	atttccctgc	ccatcttctt	ggtttatgcc	120
acctcaattg	ccgggaacat	tagcatcctc	ttcattatca	gaactgagtc	ttccctccac	180
caaccgatgt	attactttct	gtcaatgctg	gcattcactg	acctgggcct	atctaact	240
accttaccta	ccatgttcag	tgtcttcttg	ttccatgccc	gggagatctc	cttcaatget	300
tgtctgggcc	aaatgtactt	cattcatggt	ttctcgatta	ttgagtcagc	tgtactcctg	360
gctatggcct	ttgactgctt	tatagcaatc	tgagaaccct	tgcgctatgc	agccatccta	420
accaatgatg	taatcattgg	gattgggttg	gcaattgctg	gaagggcctt	ggctctgggc	480
tttccagctt	ctttcctctt	gaagaggctt	caatatcatg	atgtcaatat	tctgtcctac	540
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atctatggcc	tcatggtggt	catctgttcc	atgggacttg	attcagtget	tctcctcctc	660
tcctatgtcc	tcatcctggg	cacagcggtg	agtatagcct	ccaaggcaga	gagagtggaga	720
gccctcaata	cttgcatctc	ccacatctgt	gctgtactca	ccttctatac	accaatgatt	780
gggctatcta	tgatccatcg	ctatggacag	aatgctcctc	aattgtccat	gtgctgatgg	840
ccaatgtcta	cttgntgggt	ccacctctca	tgaaccccg	gttctacagt	gttagaccag	900
ncagattcgt	gacagaatct	ttcaaataaa	attcagaaac	atgaagtgtg	ga	952

<210> 269

<211> 944

<212> DNA

<213> Unknown (H38g118 nucleotide)

<220>

<223> Synthetic construct


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<400> 269
atggaagagg aaaatgcaac attactgaca gaatttggtc tcacaggatt tttatgtcaa      60
caaggattttt tatgggaaat acccctgttc ctggcattct tggtaataga tctcatcacc      120
atcatgggga atcttggtct gatttttctc atctggaaag accctcacct tcatatttca      180
atgtacttat tccttgggag tttagctttt gtggatactt ggttatcatc cacagtgact      240
ccgaagatgc tgatcaactt cttagctaag agtaagatga tatctctctc tgaatgcatg      300
gtacaattttt ttttcccttg caatcagtggt aaccacagaa tgttttatct cggcatcaat      360
ggcatatgat cgctatgcag acatatgcaa acctttactt tatccagtca ttatgaccaa      420
tgaactatgc atctggctat ttgtcttgct atttctaggt ggcttttttc atgctttaat      480
ccatgaaggt tttttattca gactaacctt ctgtaactcc aacatgatac aacattttta      540
ctgtgacatt atcccattgt taaagatttc atgtactgat tcttgatta attttctaatt      600
gttttttatt ttctcagggt caattcaagt ttaaccatt gggattgttt ttgtatctta      660
tatgtttgtt ctctttacaa tcttaaaaaa gaagtctaac aaaggcataa gggaagcctt      720
ttccacctgt ggagcccat acatacctct ctctttatgt tatggcctcc ttctcttcat      780
gtatgtgggc cctgcagctc cacaagcaga taatcaagat atgatggagt atctatttta      840
ccctatcatt gtgcgtttgt taaaccatat tactacagcc tgagaaataa gcaataatag      900
gttcactcac aaaaatgtta aaataaaata tttgcattgc atac          944

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<210> 270

<211> 939

<212> DNA

<213> Unknown (H38g119 nucleotide)

<220>

<223> Synthetic construct

```

<400> 270
atgtccatta tcaacacatc atatgttgaa atcaccacct tcttcttggt tgggatgcc      60
gggctagaat atgcacacat ctggatctct atccccatct gcagcatgta tcttattgct      120
attctaggaa atggcaccat tctttttatc atcaagacag agccctcctt gcatgggcc      180
atgtactatt ttctttccat gttggctatg tcagacttgg gtttgtcttt atcatctctg      240
cccactgtgt taagcatctt cctgttcaat gccctgaaa cttcttctag tgccctgctt      300
gcccaggaaat tcttcattca tggattctca gtactggagt cctcagtcct cctgatcatg      360
tcatttgata gattccttagc catccacaat cctctgagat acacctcaat cctgacaact      420
gtcagagttg cccaaatagg gatagttatc tcctttaaga gcatgctcct ggttcttccc      480
ttccctttca ctttaagaag cttgagatat tgcaagaaaa accaattatc ccattcctac      540
tgtctccacc aggatgtcat gaagttggcc tgttctgaca acagaattga tgttatctat      600
ggcttttttg gagcactctg ccttatggta gactttatc tcattgctgt gtcttacacc      660
ctgatectca agactgtacc gggaattgca tccaaaaagg aggagcttaa ggctctcaat      720
acttggtttt cacacatctg tgcaagtatc atcttctacc tgcccatcat caacctggcc      780
gttgctccacc gctttgccgg gcatgtctct cccctcatta atgttctcat ggcaaatgtt      840
ctcctacttg tacctccgct gatgaaacca attgtttatt gtgtaaaaac taaacagatt      900
agagtgaagag ttgtagcaaa attgtgtcaa tggaagatt          939

```

<210> 271

<211> 940

<212> DNA

<213> Unknown (H38g120 nucleotide)

<220>

<223> Synthetic construct

```

<400> 271
atggaagaga aaaatgcaac attgctgaca gagtttggtc tcacattatt tttatatcaa      60
cctcactgga aaataccccct gttcctggca ttcttggtaa tatactctcat caccatcttt      120
gggaatcttg gtctgattgc tgtcgtatgg aaagaccctc accttcatat cccaatatac      180
ttattccttg agaatttagc ttttgtggat gatttggttat catccacatg actctgaaga      240
tgctgatcaa cttcttcact aagagtaagt tgatttctct ctgaatgctg gatacatttt      300
ttttcctttg caattgggtg aaccacagaa tgttttatct tggcaacaat ggcatatgat      360
cgctatgtag ccatatgcaa acctttactt tatccagtca ttatgaccaa tggactgtgc      420

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atctggctat	taatcttgtc	atttctaggt	ggccttcttc	atgctttaat	tcataaggt	480
tttttataga	ttaaccttct	gtaattccaa	cacaatacat	cacttttaat	gtgacattat	540
cccattgtta	aaaattttct	gtactgattc	ttctattaac	tttccaatgg	ttttattttt	600
ctcatgttca	attcaagttt	tcaccattgg	gactgttctt	gtatcttata	catttgctct	660
ctctacaatc	ttgaaaaaga	agtctgtcaa	aggcataaga	aaagacttct	ccacctgtgg	720
agctcatatc	ttacctgtat	ctttatacta	tgggccccctc	gccttcatgt	atgtgggctc	780
tgcaccccaa	cgggctgatg	accaagatat	gatggagtct	ctattttaca	ctgtcatagt	840
tcctttatta	aatcccatga	tctacagcct	gagaaataag	caagtaatag	attcattcac	900
aaaaatgttc	aaaggaaata	atgttttagat	ctcttactca			940

<210> 272

<211> 512

<212> DNA

<213> Unknown (H38g121 nucleotide)

<220>

<223> Synthetic construct

<400> 272

tgctgagtc	aagtttctctg	agtagcagaa	aagtattgat	aaattttatt	tggtgcactt	60
tttaacaaaa	caaaaagcat	ctgccaaaca	cagaacattg	caacacctag	gccctgggct	120
ttccccccagc	attcattcac	tagcacctca	tgttttgggg	gcacaagcac	agggctttct	180
taggtctgtaa	aatcacctat	atcatctgtc	tgtccactgc	ttcaactcct	tctgcagtat	240
ccctgcaaca	atattacatg	cttatgaaat	gtgcagaca	gggaattcct	gtccttctag	300
gacccctcttc	tggtctgtgg	cagctttacc	ataagttctt	gtcttcttat	gctgaaattg	360
atttcatttt	catcttcaag	tattattgct	tctttgctct	ctcggtgtcc	aactgagtct	420
catcgctctc	ccttctaata	ctccttctgt	catctatttt	gtcttttctt	cttcagactg	480
aaaatccctg	gtagtacctg	tagtttctct	cc			512

<210> 273

<211> 924

<212> DNA

<213> Unknown (H38g122 nucleotide)

<220>

<223> Synthetic construct

<400> 273

atgaatacca	ctctatttca	tccttactct	ttccttcttc	tgggaattcc	tgggctggaa	60
agtatgcac	tctgggttgg	tttcccttct	tttgctgtgt	tcctgacagc	tgctcttggg	120
aatatcacca	tcctttttgt	gattcagact	gacagtagtc	tccatcatcc	catgttctac	180
ttcctggcca	ttctgtcatc	tattgaccgg	ggcctgtcta	catccaccat	ccctaaaatg	240
cttggcacct	tctggtttac	cctgagagaa	atctcctttg	aaggatgcct	taccagatg	300
ttcttcatcc	acctgtgcac	tggcatggaa	tcagctgtgc	ttgtggccat	ggcctatgat	360
tgctatgtgg	ccatctgtga	ccctctttgc	tacacgttgg	tgctgacaaa	caaggtggtg	420
tcagttatgg	cactggccat	ctttctgaga	cccttagtct	ttgtcatacc	ctttgttcta	480
tttatacctaa	ggcttccatt	ttgtggacac	caaattatc	ctcactacta	tggtgagcac	540
atgggcatgg	ccgcctgtc	ttgtgccagc	atcagggtta	acatcatcta	tggcttatgt	600
gccatctcta	tcctggtctt	tgacatcata	gcaattgtca	tttccctatg	acagatcctt	660
tgtgctgtat	ttctactctc	ttcacatgat	gcacgactca	aggcattcag	cacctgtggc	720
tctcatgtgt	gtgtcatgtt	gactttctat	atgcctgcat	ttttctcatt	catgacccat	780
aggtttgggc	ggaatatacc	tcactttatc	cacattcttc	tggctaattt	ctatgtagtc	840
attccacctg	ctctcaactc	tgtaatttat	ggtgtcagaa	ccaaacagat	tagagcacia	900
gtgctgaaaa	tgtttttcaa	taaa				924

<210> 274

<211> 927

<212> DNA

<213> Unknown (H38g123 nucleotide)

<220>

<223> Synthetic construct

<400> 274

atggaagagg	aaaatgcaac	attgctgaca	gagtttggtc	tcacaggatt	tttacatcaa	60
cctgactgta	aaataccgct	cttcctggca	ttcttggtaa	tatatctcat	caccatcatg	120
gggaatcctg	gtctaattgt	tctcatctgg	aaagaccctc	accttcatat	cccaatgtac	180
ttattccttg	ggagtttagc	ctttgtggat	gcttcgttat	catccacagt	gactccgaag	240
atgctgatca	acttccttagc	taagagtaag	atgatatctc	tctctgaatg	catggtacaa	300
tttttttccc	ttgtaaccac	tgtaaccaca	gaatgttttc	tcttggcaac	aatggcatat	360
gacgctatg	tagccatttg	caaagcttta	ctttatccag	tcattatgac	caatgaacta	420
tgcattcagc	tattagtctt	gtcatttata	gggtggccttc	ttcatgcttt	aatccatgaa	480
gctttttcat	tcagattaac	cttctgtaat	tccaacataa	tacaacactt	ttactgtgac	540
attatcccat	tgtaaagat	ttcctgtact	gattcctcta	ttaactttct	aatgggtttt	600
attttcgcag	gttctgttca	agttttttacc	attggaacta	ttcttatatc	ttatacaatt	660
atcctcttta	caatcttaga	aaagaagtct	atcaaaggga	tacgaaaagc	tgtctccacc	720
tgtggggctc	atctcttata	tgtatcttta	tactatggcc	ccctcacctt	caaatatctg	780
ggctctgcat	ctccgcaagc	agatgaccaa	gatatgatgg	agtctctatt	ttacactgtc	840
atagttcctt	tattaaatcc	catgatctac	agcctgagaa	acaagcaagt	aatagcttca	900
ttcacaaaaa	tgttcaaaag	caatggt				927

<210> 275

<211> 924

<212> DNA

<213> Unknown (H38g124 nucleotide)

<220>

<223> Synthetic construct

<400> 275

atggcggaata	gaaacaacgt	gacagagttt	attctattgg	ggcttacaga	gaatccaaaa	60
atgcagaaaa	tcatatttgt	tgtgttttgt	catctacatc	accaccatga	taggaaatgt	120
gtcatttgtg	gtcaccatca	ctgccagccc	atcattgagg	tcccccatgt	aatttttctt	180
ggcctatctg	tcctttattg	atgcctgcta	ttcctctgtc	aatgtctcta	agctgatcac	240
agattcactc	tatgaaaaca	agactatctt	actcaatgga	tgtatgactc	aagtcttttg	300
agaacatttt	ttcagagggtg	ttgagggtcat	cctacttact	gtaatggcct	atgactgcta	360
tgtgggtcatc	tgcaagccct	tgcgctatac	caccatcatg	aagcagcatg	tttgtagcct	420
gctagtggga	gtgtcacggg	tgggaggctt	tcttcatgca	accatacaga	tcctcttcat	480
cttccaatta	cctttctgta	gttctaattg	catagatcac	tttactgtga	tctcaaccct	540
ttgctcaatc	ttgcctgcac	taatacccac	actctaggac	tcttcgttgc	tgccaacagt	600
gggttcatat	gcctgttaaa	ctttctcttg	ctcctggctt	cctatgtggg	catactgtac	660
tccttaagga	cccacagctt	agaggcaagg	cacaaaggcc	tctccacctg	tgtctcccac	720
aacacagttg	tcattcttatt	ctttataccc	tgcatatttg	tgtacatgag	acctccagct	780
actttaccca	ttgataaagc	agttgctgta	ttctacacta	tgataactcc	tatgttaaag	840
cccttaatct	acaccttgag	gaatgctcag	atgaaaaatg	ccattaggaa	attgtgtagt	900
aggaaaagcta	tttcaagtgt	caaa				924

<210> 276

<211> 963

<212> DNA

<213> Unknown (H38g125 nucleotide)

<220>

<223> Synthetic construct

<400> 276

atgttccttc	ccaatgacac	ccagtttcac	ccctcctcct	tcctgttgct	ggggatccca	60
ggactagaaa	cacttcacat	ctggatcggc	tttcccttct	gtgctgtgta	catgatcgca	120
ctcatagggg	acttcactat	tctacttgtg	atcaagactg	acagcagcct	acaccagccc	180
atgttctact	tcctggccat	gttggccacc	actgatgtgg	gtctctcaac	agctaccatc	240
cctaagatgc	ttggaatctt	ctggatcaac	ctcagaggga	tcattcttga	agcctgcctc	300
accagatgt	tttttatcca	caacttcaca	cttatggagt	cagcagtcct	tgtggcaatg	360

gcttatgaca	gctatgtggc	catctgcaat	ccactccaat	atagcgccat	cctcaccaac	420
aagggtgttt	ctgtgattgg	tcttggtgtg	tttgtgaggg	ctttaatttt	cgtcattccc	480
tctatacttc	ttatattgcg	gttgcccttc	tgtgggaatc	atgtaattcc	ccacacctac	540
tgtgagcaca	tgggtcttgc	tcactctatct	tgtgccagca	tcaaaatcaa	tattatztat	600
ggtttatgtg	ccatttghtaa	tctggtgttt	gacatcacag	tcattgccct	ctcttatgtg	660
catattcttt	gtgctgtttt	cgtcttctct	actcatgagc	cccgaactca	gtccctcagc	720
acatgtgggt	cacatgtgtg	tgtaatcctt	gccttctata	caccagccct	cttttccctt	780
atgactcatt	gctttggccg	aaatgtgccc	gcctatatcc	atatactcct	agccaatctc	840
tatgttgttg	tgccaccaat	gctcaatcct	gtcatatatg	gagtcagaac	caagcagatc	900
tataaatgtg	taaagaaaat	attattgcag	gaacaaggaa	tggaaaagga	agagtaccta	960
ata						963

<210> 277

<211> 894

<212> DNA

<213> Unknown (H38g126 nucleotide)

<220>

<223> Synthetic construct

<400> 277

atgagaaatc	acacaatggt	gactgaattc	atccttctgg	gaatccctga	gacagagggc	60
ctagagacag	cccttttatt	cctgttctcc	tcattttatt	tatgcaccct	cttgggaaac	120
gtgcttatcc	ttacagctat	catctctctc	actcgacttc	acactcctat	gtattttttc	180
ttgggaaacc	tctccatctt	tgacctgggt	ttctcttcaa	cgactgttcc	caagatgttg	240
ttctaccctt	cggggaacag	ccatgctatc	tcgtatgcag	gctgcgtgtc	ccagcttttc	300
ttctaccatt	tcctaggtct	tactgagtgt	ttcctctaca	cagtgtgtgc	ctgtgaccgc	360
tttgttgcca	tatgttttcc	tttgagatac	acgggtcatc	tgaaccacag	ggtgtgcttt	420
atgtttggcca	cggggacctg	gatgattggc	tgtgtccatg	ccatgatcct	aactcccctc	480
accttccagt	taccttactg	tggccctaac	aagggtgggt	attacttctg	tgatattcct	540
gcagtgttac	ctctagcctg	taaggacaca	tccttagccc	agagggtagg	ttttacaaat	600
gttgggtctt	tgtctctcat	ttgctttttt	ctcatccttg	tttctatac	ttgcattggg	660
atttccatat	caaaaatccg	ctcagcagag	ggcaggcagc	gggccttctc	cacctgcagc	720
gtcacctca	ctgcaatcct	ttgtgcttat	gggccagtca	tcgttatcta	tctacaaccc	780
aatcccagtg	ccttgcttgg	ttccataatt	cagatattga	ataatctggt	aaccccaatg	840
ttgaatccac	taatctatag	ccttaggaat	aaggatgtaa	aatcagatca	gcc	894

<210> 278

<211> 972

<212> DNA

<213> Unknown (H38g127 nucleotide)

<220>

<223> Synthetic construct

<400> 278

atggaggagg	aaaatacaac	attgctgaca	gagtttggtc	tcacaggatt	tttatatcaa	60
ccacagtggg	aaataccctt	gttcctggca	ttcttggtaa	tatagctcat	caccatcatg	120
gggaatcttg	gtctaattgt	tctcatctgg	aaagaccctc	accttcatat	cccaatgtat	180
ttattccgtg	ggagtgttgc	ctttgtggat	gcttgggtat	catccacagt	gactccaaag	240
atgctgatca	acttcttagc	taagagtaag	atgatattct	tctctgaatg	catggtacaa	300
tttttttctt	ttgtaatcag	tgttaaccaca	gaatgtttta	tctcggcatc	aatggcatat	360
gatcgctatg	tagccatttg	caaagcttta	ctttatccag	tcattatgac	caacggacta	420
tgcattccagc	tattagtctt	gtcattttata	ggtggccttc	ttcatgcttt	aatccatgaa	480
atfttttttat	tcagattaac	cttctgtaat	tccaacataa	tacaacactt	ttactgtgac	540
attatcccat	tgttaaagat	ttcctgtact	gattctttta	ttaactttct	aatgggtttt	600
atftttcgcag	attcaattca	agttttttacc	attggaacta	ttcttatatc	ttatacactt	660
gtcctcctta	taatcttaaa	aaataagtct	gtcaaaaggga	tacaaaaagc	tgtctccacc	720
tgtggagctc	atctcttata	tgtatcttta	tactatgggc	cccttgtctt	catgtatgtg	780
ggctctgcat	ccccgcaagc	agatgacca	gatatgatgg	agtctctatt	ttacactgtc	840
atcgttccct	tattaaattc	catgatctac	agcctgagaa	acaagcaagt	aatagcttca	900

ttcacaaaaa tggtcaaaag aaatgttttag atctcataca atctctgttc tctgtttact 960
 aaaattttcc ca 972

<210> 279

<211> 924

<212> DNA

<213> Unknown (H38g128 nucleotide)

<220>

<223> Synthetic construct

<400> 279

atgatgagta	accagacggt	ggtaaccgag	ttcatcctgc	agggcttttc	ggagcaccca	60
gaataccggg	tggtcttatt	cagctgtttc	ctcttctct	actctggggc	cctcacaggt	120
aatgtcctca	tcaccttggc	catcacgttc	aaccctgggc	tccacgctcc	tatgtacttt	180
ttcttactca	acttggctac	tatggacatt	atctgcacct	cttccatcat	gccccaggcg	240
ctggccagtc	tggtgtcgga	agagagctcc	atctcctacg	ggggctgcat	ggcccagctc	300
tatttctca	cgtgggctgc	atcctcagag	ctgctgctcc	tcacggtcac	ggcctatgac	360
cggtagcgag	ccatctgcca	cccgtgcat	tacagcagca	tgatgagcaa	ggtgttctgc	420
agcgggctgg	ccacagccgt	gtggctgctc	tgcgcctgca	acacggccat	ccacacgggg	480
ctgatgctgc	gcttggattt	ctgtggcccc	aatgtcatta	tccatttctt	ctgcgaggtc	540
cctccccctgc	tgcttctctc	ctgcagctcc	acctacgtca	acgggtgcat	gattgtcctg	600
gcggtatgctt	tctacggcat	agtgaacttc	ctgatgacca	tgcgctccta	tggtttcatc	660
gtctccagca	tcctgaaggt	gaagactgcc	tgggggaggc	agaaagcctt	ctccacctgc	720
tcttcccacc	tcaccgtggg	gtgcatgtat	tacaccgctg	tcttctacgc	ctacataagc	780
ccggtctctg	gctacagcgc	aggggaagagc	aagttggctg	gcctgctgta	cactgtgctg	840
agtcttacct	tcaacccctc	catctatact	ttgagaaaca	aggagggtcaa	agcagccctc	900
aggaagcttt	tccctttctt	caga				924

<210> 280

<211> 958

<212> DNA

<213> Unknown (H38g129 nucleotide)

<220>

<223> Synthetic construct

<400> 280

atggatgacg	aaaatgcaac	attgctgaca	gagtttggtc	tcacaggact	tacatatcaa	60
tcagagtggg	aaatacccct	gttcctggca	ttcttggtaa	tatatctcat	caccatcatg	120
gcaaactctg	gtctgattgc	tgctatctgg	aaagactcac	accttcacat	tccaatgtac	180
ttattccttg	ggagttagc	ctttgtggat	gcttggttat	catcctcagt	gaccacctaa	240
atgctgatca	gcttttttagc	taagagtatg	attatctctg	tctctgaatg	caagatacaa	300
tttttttctt	ttggaatcag	tggaaccaca	gaatgttttc	tcttggaac	aatggcatat	360
gatcgctatg	tagccatatg	caaaccctta	ctttatccag	tcattatgac	caatggactg	420
tgtatctggc	tattagtctt	gtcatttata	gggtggcttc	ttcatgcctt	aattcatgaa	480
ggtattttat	tcagattaac	cttctgtaat	tccaacataa	tacatcactt	ttactgtgac	540
attatcccat	tgtaaagat	ttcctgtact	gacccttcta	ttaatttttt	aatgcttttt	600
attttgtctg	gttcaataca	ggtattcact	atcttgactg	ttcttgtctc	ttatacattt	660
gtcctcttta	caatcttaaa	aaaaaaagtc	tgccaaagac	ataaggaaag	ccttttccac	720
ctgtggagcc	catctcttat	ctgtttcttt	atactatggc	ccccctctct	tcatgtatgt	780
gcaccctgca	tctccacaag	cagatgatca	agatatggg	gagtctctat	tttcaactgt	840
cataattcct	ttcttaaatc	ccattatcta	cagcctgaga	aataagcaag	tcatagattc	900
actgacaaaa	acattaaaaag	gaaatgttta	gatctcatac	tggaatgtat	tctctatt	958

<210> 281

<211> 933

<212> DNA

<213> Unknown (H38g130 nucleotide)

<220>

<223> Synthetic construct

<400> 281

atggttgaag	aaaatcatac	catgaaaaat	gagtttatcc	tcacaggatt	tacagatcac	60
cctgagctga	agactctgct	gtttgtggtg	ttctttgcca	tctatctgat	caccgtggtg	120
gggaatatta	gtttgtggtg	actgatattt	acacaccgtc	ggcttcacac	accaatgtac	180
atctttctgg	gaaatctggc	tcttgtggat	tcttgtctgt	cctgtgctat	tacccccaaa	240
atgttagaga	acttcttttc	tgagggcaaa	aggatttccc	tctatgaatg	tgagtagacg	300
ttttattttc	tttgcactgt	ggaaactgca	gactgctttc	ttctggcagc	agtggcctat	360
gaccgctatg	tggccatctg	caaccactg	cagtaccaca	tcagatgtc	caagaaactc	420
tgcatcaga	tgaccacagg	cgccttcata	gctggaaatc	tgcatcccat	gattcatgta	480
gggcttgtat	ttaggttagt	tttctgtgga	ttgaatcaca	tcaaccactt	ttactgtgat	540
actcttccct	tgtatagact	ctcctgtgtt	gaccttttca	tcaatgaact	ggttctattc	600
atcttctcag	gttcagttca	agtctttacc	ataggtagt	tcttaatatc	ttatctctat	660
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tgtgcatccc	acttttcatc	agtttcatta	ttctatggat	ctattttttt	cctatacatt	780
agaccaaat	tgcttgaaga	aggaggtaat	gatataccag	ctgctatttt	atttacaata	840
gtagttccct	tactaaatcc	tttcatttat	agtctgagaa	acaaggaagt	aataagtgtc	900
ttaagaaaaa	ttctgctgaa	aataaaatct	caa			933

<210> 282

<211> 979

<212> DNA

<213> Unknown (H38g131 nucleotide)

<220>

<223> Synthetic construct

<400> 282

tatacagacc	cacagaatct	aacagatgtc	tttatattcc	tcctcctaga	actctcagag	60
gatccagcac	tgagctgggt	cgctactggg	ctgtgcctgt	gtgcctgggc	acgggtgctgt	120
ggaacctgct	cagcatcctg	gccgtcagcc	ctgactccca	cctccacacc	cccatgcact	180
tcttctctctg	caacctgtcc	ttgcctgaca	tcggtttcac	ctccaccacg	gtccccaaaga	240
tgatcgtgga	catccaatct	cacagcagag	tcctctccta	tgagggctgc	ctgactcaga	300
tgtctctctc	tgccattttt	ggaggcatgg	aagagagaca	tgctcctgag	tgtgatggcc	360
tatgaccagt	ttgtagccat	ctgtcaccct	ctgtatcatt	cagccatcat	gaaccctgtg	420
ttctgtgggt	tcctgggtttt	gttgtctttt	ttttctcagt	cttttagact	cccagctgca	480
aaactgatcg	ccttacaat	cacctgtca	aaggatgtgg	aaattcctaa	ttttttctgt	540
gacctttctc	aactccccca	tcttgcatgt	tgtgacacct	tcaccaataa	cattatcatg	600
tatttccctg	ctgccatatt	tggttttctt	cccatctcgg	ggacctttt	ctcttactat	660
aaaattgttt	cctccattct	gagggtttca	tcctcagggt	ggagctataa	agccttcgcc	720
acctgtggat	ctcacctgtc	agttgtttgc	tgattttatg	gaacaggcgt	tggagggtac	780
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gtggtcaccc	ccatgctgaa	tcccttgatc	tacagcctga	gaaacaggga	tattaaagggt	900
gtcctgtggc	agcctgtcag	cgcacggca	gcacagtctc	atctcaatat	cttatctgtt	960
ccattccctt	tgaggatg					979

<210> 283

<211> 987

<212> DNA

<213> Unknown (H38g132 nucleotide)

<220>

<223> Synthetic construct

<400> 283

atggaaccac	agttcaccac	ccagggatca	atgtttgtcc	tgtaggggta	gtcacagacc	60
caagagctcc	agagagtcac	gttcattctg	ttcctgttag	tctatgttac	caccattgtg	120
ggaaacctcc	ttatcatggg	cacagtgaat	tttgactgcc	ggctccacac	ccatgtattt	180
tctgtcccg	aatctagctc	tcatagacgt	ctgctattcc	acagtcacct	ctccaaagat	240
gctgggtggac	ttcctccatg	agaccaagac	gatctcctac	cagggtgca	tggcccagat	300

cttcttcttc	caccttttgg	gaggtgggac	tgtctttttt	ctctcagtca	tggcctatga	360
ccgctacata	gccatctccc	agccctccg	gtatgtcacc	atcatgaaca	ctcaattgtg	420
tgtgggcttg	gtagtagccg	cctggcggtg	ggggctttgt	ccactccatt	gtccaactgg	480
ctgtgatacg	tccacagcct	ctatgtggcc	ccaatatacct	agataacttc	tactgtgatg	540
ttccccaagt	actgagactt	gcctgcactg	atacctccct	cctggagttc	ctcatgatct	600
ccaacagtgg	gctgctagtt	atcatctggt	tcctcctcag	tctgatgtct	tatactgtca	660
tcctgggtgat	gctgagggtc	cactcgggaa	aggcaaggag	taaggcagct	tccacttgca	720
ccaccacat	catcgtggtg	tccatgatct	tcattccatg	tatctatata	tataacctggc	780
cctttcaccc	cattcatcat	ggacaaggct	gtgtccatca	gtacacagct	catgaccccc	840
atgctcaacc	ccatgatcta	cacctgaga	aaccaggaca	tgaaagcagc	catgaggaga	900
ttaggcaagt	gcctagtaat	ttgcaggggag	ttaaacttta	agtaagttga	ctttaaatga	960
caaattgctc	tggattttta	ttttccc				987

<210> 284

<211> 387

<212> DNA

<213> Unknown (H38g133 nucleotide)

<220>

<223> Synthetic construct

<400> 284

atgcaaggag	aaaacttcac	catttggagc	atTTTTTct	tggagggatt	ttcccagtac	60
ccagggttag	aagtggttct	cttcgtcttc	agccttgtaa	tgtatctgac	aacgctcttg	120
ggcaacagca	ctcttatTTT	gatcactatc	ctagattcac	gccttaaaac	ccccatgtac	180
ttattccttg	gaaatctctc	tttcatggat	atttgttaca	catctgcctc	tgttcctact	240
ttgctggtga	acttgcgtgc	atcccagaaa	accattatct	tttctgggtg	tgctgtacag	300
atgtatctgt	cccttgccat	gggctccaca	gagtggtgtc	tcctggccgt	gatggcatat	360
gaccgttatg	tggccatttg	taacccg				387

<210> 285

<211> 1005

<212> DNA

<213> Unknown (H38g134 nucleotide)

<220>

<223> Synthetic construct

<400> 285

tctacagacc	cacagaatct	aacagatgtc	tctatatTcc	tcctcctaga	acctcagagg	60
atccagaacg	gcagctgggc	cttgctgggc	tgttcctgtc	catgtgcctg	gtcacgggtg	120
tggggaaacct	gatcatcatc	ctggacgtca	gccctgactc	ccacctcccc	acccccatgt	180
actttcttct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acggtcccca	240
agatgattgt	ggacatccaa	tctcacagca	gagtcattct	ctatgcaggc	tgccctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tgggaagagag	acacgctcct	gagtggtgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctatgtc	attcagccag	catgaacccg	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttc	tcagtctttt	agacacccag	480
ctgcacaact	tgattgcctt	acaaatgacc	tgcttcaagg	atgtggacat	tcctaatttc	540
ttctgtgacc	cttctcaact	ccccatctt	gcattgtgtg	acaccttcac	caataacata	600
atcatgtatt	tccctgctgc	catatttggt	tttcttcaga	tctcggggac	ccttttctct	660
tactataaaa	ttgtttcttc	cattctgagg	gtttcttcat	caggtgggaa	ctataaagcc	720
ttctccacct	gtgggtctca	cctgtcagtt	gtttgtgat	tttatggaac	aggcgttggga	780
gggtacctca	gttcagatgt	gtcatcttcc	ccgagaaagg	gtgcagtggc	ctcagtgatg	840
tacacgggtg	tcacccccat	gctgaacccc	ttcatctaca	gcctgagaaa	cggggatatt	900
aaaagtgtcc	tgcggcggcc	gcaaggcagc	aaggctaat	atcaatatct	tcttatctgt	960
tccattcctt	ttgtagggtg	ggttaaaaaa	ggcagcaagg	tcaaa		1005

<210> 286

<211> 958

<212> DNA

<213> Unknown (H38g135 nucleotide)

<220>

<223> Synthetic construct

<400> 286

atgaagaata	aaaggaatgt	gactgaattc	gttttaacag	gtcttacaca	gaaccctaaa	60
atggagaaag	tcatgtttgc	agtatttttg	gttctttaca	tgataacact	ttcaggcaac	120
ctgctccttg	tgggttacaat	taccaccagc	caggctctta	gctcccccat	gtacttcttc	180
ctgagccacc	tttctttgat	agacacagtt	tattcttctt	cttcagctcc	taagttgatt	240
gtcgattccc	ttcatgagaa	gaaaatcatc	tcctttaatg	gggtgatggc	tcaagcctat	300
gaagaacaca	tttttggtgc	tactgagatc	atcctgctga	cagtgatggc	ctgtgacaac	360
tatgtggcca	tctgcaaacc	tctgcaactac	acaaccatca	tgagccacag	cctgtgcatt	420
ctcctagtgg	tagtggcctg	gataggagga	tttctccatg	caaataattca	gattctattt	480
acagtatggc	tgcccttctg	tgcccccaat	gtcatagacc	acttcattgt	tgacttgtgc	540
cctttgttaa	aacttggttg	cctggacact	catacccttg	gtctctttgt	tgctgccaac	600
agtgggttca	tctgcttatt	aaacttcctt	ctctaggttg	tatcctatgt	gatcatcttg	660
agatgtttta	agaactatat	cttggagggg	aggggtaaa	ccctctccac	ctgtatttct	720
cacatcataa	tagttgtctt	attctttgtg	ccttgtatat	ttgtgtatct	gcacccagtg	780
acaaactctg	ccattgata	aagctgctgc	tgtattttat	actatgggtg	tcccaatgtt	840
aaatcctttg	atctacacac	tcagaaatgc	tgaggtaaaa	agtgcaataa	ggaagctttg	900
gagaaaaaaa	gttattttcag	ataatgacta	aataagacca	ttgagcactc	atcataga	958

<210> 287

<211> 937

<212> DNA

<213> Unknown (H38g136 nucleotide)

<220>

<223> Synthetic construct

<400> 287

atggagattg	gaaaccatac	cacagtgaca	gagtttatta	ttttgggggt	aactgaggat	60
cctacacttt	gtgacatctt	ctttgtgata	tttctaggaa	tctacattgt	caccttaata	120
ggcaatatca	gcataataaa	gaagctgttc	ccaacttcac	actcccatgt	acctgttccct	180
cagccacttg	gctttttgtg	acatagggct	tgccacagta	gtcacacctc	taatgcttat	240
gggattccta	agacgtggaa	cagccctccc	tgctactagc	tgtgaagccc	agctctgttc	300
tgtagtcatg	tttgggacgt	ctgaatgctt	cctactggcg	accatggcct	atgatcgcta	360
tgtggccatc	tgctcacccc	tggtgaactc	cacccacttg	tcccccataa	tctgcatact	420
cttagtgggg	gtttgctacc	tggtgggatg	tgtgaatgcc	tcaacattta	ctagttgttt	480
attgagtctg	tctttctgtg	gaccaaatac	gatagatcat	tttttctgtg	atttctctcc	540
tttgttgaaa	ctttcctgct	caaataatct	cattcctgaa	attatccctt	ccatctcttc	600
tggaatctat	attgtggtca	cagtatttgc	catagccatc	tcctacatct	acatccctcat	660
caccatcctg	aagatgcgct	cgcgcgaggg	gcgcacaca	gcctctctca	cctgtacctc	720
ccacctcgct	gcgggttact	tctactatgg	aacgattacc	ttcattttat	tgatgcccac	780
atccagttac	tcaactagcc	agaacagatt	gatatcgctg	tcctacacag	tggtaatccc	840
catactgaac	ccctttatct	atagtctgag	gaacagagat	gtaaaggagg	cactaagaaa	900
ggcaactgtc	agaatatatt	cttaggatca	atttgta			937

<210> 288

<211> 971

<212> DNA

<213> Unknown (H38g137 nucleotide)

<220>

<223> Synthetic construct

<400> 288

cacacagagc	cacggaatct	cacagggtgc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggc	120
acgggtgctg	ggaacctgct	gagcatcccc	gctgtcagct	ctgactcccc	gctccacacc	180
cccacgtact	tcttcctctc	catcctgtgc	tgggctgaca	tcggttttac	ctcggccacg	240

gtttccaaga	cgattgtgga	catgcagtc	catagcagag	tcattctctca	tgcgggctgc	300
ctgacacaga	tgtctttctt	ggtccttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	actgctttgt	aggcatctgt	cgccctctgc	actaccaggt	catcgtgaat	420
cctcatctct	gtgtcttctt	tgttttgggt	tcctttttcc	ttagcctggt	ggattcccag	480
ctgcacagtt	ggattgtgtt	acaattcacc	atcatcaaga	atgtggaaat	ctctaatttt	540
gtctgtgacc	cctctcaact	tctcaaactt	gcctgttctg	acagcgtcat	caatagcatc	600
ttcatatatt	ttggtagtac	tatgtttggt	tttcttccca	tttcagggat	ccttttgtct	660
tactataaaa	tcgtcccttc	cattctaagg	atttcatcgt	çagatgggaa	gtataaagcc	720
ttctccacct	atggctctca	cctagcagtt	ttttgctgat	ttgatggaac	aggcattggc	780
gtgtacctgt	cttcagctgt	ggcaccaccc	ctcaggaatg	gtgtggtggt	gtcagtgatg	840
taagctgtgg	tcaccccat	gctgaacctt	ttcatctaca	gcctgagaaa	caggacata	900
caaagtgcc	tgcggaggct	gcgcagcaga	acagtcgaat	ctcatgatct	gttccatcct	960
ttttctggtg	t					971

<210> 289

<211> 954

<212> DNA

<213> Unknown (H38g138 nucleotide)

<220>

<223> Synthetic construct

<400> 289

atgattcagc	ctatggcgct	accagcaac	agctccactg	tcccagtcct	tgaattcctc	60
ctcacctgct	tcccacactt	ccagagtgg	cagcactggc	tctccctgcc	cctcagcctt	120
ctcttctctc	tggccatggg	agctaacc	accctcctga	tcaccatcca	gctggaggcc	180
tctctgcacc	agccctgtga	ctacctgctc	agcctcctct	ccctgctgga	catcgtgctc	240
tgcctcaccg	tcatccccaa	ggtcctggcc	atcttctggt	atgatcttag	gtcgatcagc	300
ttccctgcct	gcttctctca	gatgttcac	atgaacagtt	tcctcccat	ggagtctgc	360
acgtttatgg	tcatggccta	tgaccgttat	gtggccatct	gccaccact	gcggtaccca	420
tccatcatca	ctaataaatt	tgtggccaaa	gctagtgtct	tcattgtggt	gcggaatgcg	480
cttcttactg	cacccattcc	tatcctcact	tccctgctcc	attactgtgg	ggaaaatgtc	540
attgagaact	gcactctgtc	caacttgtct	gtgtccaggc	tctcctgtga	taatttcacc	600
cttaacagaa	tctaccaatt	tgtggctggt	tggaccttgc	tgggctcaga	tttatctctc	660
atcttctctc	cttacacctt	cattctaaga	gctgtgctta	gattcaaagc	agagggggcg	720
gcagtgaagg	ccctgagcac	atgtggctcc	cacttcaccc	tcattctttt	cttcagcacc	780
atactgctgg	tgtgtgtgtt	gacaaacgtg	gccagaaaga	aggccccat	ggacatcctg	840
atcctgctga	acgtccttca	tcaccttatt	ccctctgcgt	tgaaccttat	tgtgtatggg	900
gttcggacca	aagagataaa	acagggaatt	cagaagttac	tgcagagagg	gagg	954

<210> 290

<211> 713

<212> DNA

<213> Unknown (H38g139 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(713)

<223> n = A,T,C or G

<400> 290

cccaaggctc	cggacttttt	tgtgtttggc	ctaagggcc	ttagttttcc	ggccggtttt	60
ctccaaaagt	acattaagaa	ttgtttccaa	gccaggagtt	ttggccattc	aaggctcagg	120
ccataggatc	gttaagggaac	ccttctgcca	cccccttgaa	atatccctcc	attcatcacg	180
gatecccttg	gagtcaaggc	tgccagggtt	attttgccca	gnaatgggtg	taatgactct	240
gcccatcccc	catcctttca	gcacaactcc	gttattgtgg	aagaaatgtc	attgagaact	300
gcactgtgct	caatatgtct	gtttccagac	tctcctgcga	tgatgtcacc	atcaatcacc	360
tttaccatt	tgtctggaggc	tggactctgc	taggatctga	cctcatcctt	atcttctctc	420
cctacacctt	cattctgcga	gctgtgctga	gactcaaggc	agagggtgcc	gtggcaaagg	480

ccctaagcac	atgtggctcc	cacttcatgc	tcatoctctt	cttcagcacc	atccttctgg	540
tttttgcct	cacacatgtg	gctaagaaga	aagtctcccc	tgatgtgcca	gtcttgctca	600
atgttctcca	ccatgtcatt	cctgcagccc	ttaaccccat	catttacggg	gtgagaaccc	660
aagaaattaa	gcaggggaatg	cagaggttgt	tgaagaaagg	gtgctaacaa	gga	713

<210> 291

<211> 924

<212> DNA

<213> Unknown (H38g140 nucleotide)

<220>

<223> Synthetic construct

<400> 291

atgaattccc	tgaaggacgg	gaatcacacc	gctctgacgg	ggttcatcct	attgggctta	60
acagatgac	caatccttcg	agtcatoctc	ttcatgatca	tcctatctgg	taatctcagc	120
ataattat	ttatcagaat	ttcttctcag	ctccatcatc	ctatgtat	ctttctgagc	180
cacttggctt	ttgctgacat	ggcctattca	tcttctgtca	cacccaacat	gcttgtaa	240
ttcctgggtg	agagaaatac	agtctcctac	cttggtatgtg	ccatccagct	tggttcagcg	300
gctttctttg	caacagtcga	atgcgtcctt	ctggctgcca	tggcctatga	ccgctttgtg	360
gcaatttgca	gtccactgct	ttattcaacc	aaaatgtcca	cacaagtcag	tgtccagcta	420
ctcttagtag	tttacaatgc	tggttttctc	attgctgtct	cctatactac	ttccttctat	480
tttttactct	tctgtggacc	aaatcaagtc	aatcattttt	tctgtgattt	cgctccctta	540
cttgaactct	cctgtttctga	tatcagtgtc	tccacagttg	ttctctcatt	ttcttctgga	600
tccatcattg	tggtcactgt	gtgtgtcata	gccgtctgct	acatctatat	cctcatcacc	660
atcctgaaga	tgcgctccac	tgaggggcac	cacaaggcct	tctccacctg	cacttcccac	720
ctcactgtgg	ttaccctgtt	ctatgggacc	attaccttca	tttatgtgat	gcccaatttt	780
agctactcaa	ctgaccagaa	caaggtgggtg	tctgtgttgt	acacagtggt	gattcccatg	840
ttgaaccccc	tgatctacag	cctcaggaac	aaggagatta	agggggctct	gaagagagag	900
cttgttagaa	aaatactttc	tcac				924

<210> 292

<211> 1006

<212> DNA

<213> Unknown (H38g141 nucleotide)

<220>

<223> Synthetic construct

<400> 292

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gatccagaac	tgcaaccggg	cgctcgtggg	ctgttctgt	ccatgtgcct	cgctcatggg	120
ctggagaacc	tgctcatcat	cctggacgtc	agccctgact	cccacctccc	caccccatg	180
tacttcttcc	tctccaacct	gtccttgctt	gacatcggtt	tcacctccac	cacgggtccc	240
aagatgattg	tggaacatcca	gtctcacagc	agagtcatct	atgcaggctg	cctgactgtg	300
atgtctctct	ttgccatttt	tgaggcatg	gaagagagac	atgctcctga	gtgtgatggc	360
ctatgaccgg	ttttagacca	tctgtcaccc	tctatatcgc	tcagccatct	tgaaccctg	420
tttctgtggc	ttcctagatt	tggtgtcttt	tttttttttc	cctcagtctt	ttagactccc	480
agctgcacaa	cttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
tcttctggga	accttctcaa	ctccccatc	ttgcatgttg	tgacaccttc	accaggaaca	600
tcagcatgta	tttccctgct	gccgtatttg	gttttctttc	catctcgggg	acctttttct	660
cttactgtaa	aatggtttcc	tccattctga	gggtttcatc	atcagggtggg	aagtataaac	720
cttctccacc	tgagggtccc	acctgtcagt	tgtttgctga	ttttatggaa	caggcggttg	780
agagtacctc	ggttcagatg	tgctatcttc	cccagaaaag	gggtgcagtgg	cctcagtgat	840
gtacacgggtg	gtcaccccca	tgctgaaccc	cttcatctac	agcctgagaa	acggggatat	900
taaaagtgtc	ctgcggcggc	cgcaaggcag	cacagtctca	tctcaatacc	ttcttatctg	960
ttccattcct	ttttaggggt	gggttaacaa	agacagcaag	gtcaaaa		1006

<210> 293

<211> 933

<212> DNA

<213> Unknown (H38g142 nucleotide)

<220>

<223> Synthetic construct

<400> 293

atggggactg	gaaatgacac	cactgtggta	gagtttactc	ttttgggggt	atctgaggat	60
actacagttt	gtgctatttt	atttcttggt	tttctaggaa	tttatgttgt	caccttaatg	120
ggtaatatca	gcataattgt	attgatcaga	agaagtcata	atcttcatac	acccatgtac	180
attttctctc	gccatttggc	ctttgtagac	attgggtact	cctcatcagt	cacacctgtc	240
atgctcatga	gcttcctaag	gaaagaaacc	tctctccctg	ttgctgggtg	tgtggcccag	300
ctctgttctg	tagtgacgtt	tggtacggcc	gagtgtcttc	tgtgggtgc	catggcctat	360
gatcgctatg	tggccatctg	ctcaccctg	ctctactcta	cctgcatgtc	ccctggagtc	420
tgcatactct	tagtgggcat	gtcctacctg	ggtggatgtg	tgaatgcttg	gacattcatt	480
ggctgcttat	taagactgtc	cttctgtggg	ccaaataaag	tcaatcactt	tttctgtgac	540
tattcaccac	ttttgaagct	tgtttgttcc	catgatttta	cttttgaaat	aattccagct	600
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tgcacctccc	acctcactgc	agtcactctg	ttctatggga	ccattacctt	catttatgtg	780
atgcccaagt	ccagctactc	aactgaccag	aacaaggtgg	tgtctgtgtt	ctacaccgtg	840
gtgattccca	tgttgaaccc	cctgatctac	agcctcagga	acaaggagat	taagggggct	900
ctgaagagag	agcttagaat	aaaaatat	tct			933

<210> 294

<211> 942

<212> DNA

<213> Unknown (H38g143 nucleotide)

<220>

<223> Synthetic construct

<400> 294

atgctcctta	gcaattcaag	ctggaggcta	tcccagcctt	cttttctcct	ggtagggatt	60
ccagggttag	aggaaagcca	gcactggatt	gcactgcccc	tgggcatcct	ttacctcctt	120
gcttttagtg	gcaatgttac	cattctcttc	atcatctgga	tggaccatc	cttgaccaa	180
tctatgtacc	tcttctgtc	catgctagct	gccatcgacc	tggttctggc	ctcctccact	240
gcacccaaag	cccttgcaat	gtcctgggtt	catgcccacg	agattgggta	catcgtctgc	300
ctgatccaga	tggtcttcat	ccatgcattc	tcttccatgg	agtcaggggt	acttgtggcc	360
atggctctgg	atcgctatgt	agccatttgt	caccccttgc	accattccac	aatcctgcat	420
ccaggggtca	tagggcgcat	cggaatgggt	gtgctgggtg	ggggattact	actccttacc	480
cccttcccca	ttttgttggg	aacacttatc	ttctgccaag	ccaccatcat	aggccatgcc	540
tattgtgaac	atatggctgt	tgtgaaactt	gcctgctcag	aaaccacagt	caatcgagct	600
tatgggctga	ctatggcctt	gcttgtgatt	gggctggatg	ttctggccat	tgggtgttcc	660
tatgccacac	tcctccaggc	agtgtgaag	gtaccaggga	gtgaggcccg	acttaaggcg	720
tttagcacat	gtggctctca	tatttgtgtc	atcctgggtc	tctatgtccc	tgggaatttc	780
tccttctca	ctcaccgctt	tggtcatcat	gtaccccatc	atgtccatgt	tcttctggcc	840
acacggtatc	tcctcatgcc	acctgcgctc	aatcctcttg	tctatggagt	gaagactcag	900
cagatccgcc	agcgagtgtc	cagagtgttt	acacaaaagg	at		942

<210> 295

<211> 945

<212> DNA

<213> Unknown (H38g144 nucleotide)

<220>

<223> Synthetic construct

<400> 295

atgacaaaag	gcaatcgtag	cacagtgtacc	gaatttgtcc	tcattgggatt	cacagaccgt	60
cctgagctgc	agctccccct	ctttgtgggtg	ttccttgtca	tttatctcat	cacctgtgtg	120
ggaaaccttg	gcatgatcct	gctgatcaga	gcagactcgc	ggctccacac	ccccatgtac	180

tacttctca	gtcacctggc	attcattgat	ctgtgttact	catcttctat	tgggccaag	240
atgctgcaaa	atgtattggt	gaagaaaaaa	accatctcct	tttcaggctg	ttttgtcag	300
ctgtacttct	ccggtgcttt	tgccactaca	gaatgattcc	tcttgccac	aatgccctac	360
gaccgctacg	tggccatctg	caacccccctg	atttacacag	ctattatgac	gcagcgggtc	420
tgcagggagt	tagtgatagg	ggtctataacc	tatggcttcc	gaaactctgt	gatacagaca	480
gctctgacgt	ttcagctgtc	tttctgcaac	tccgacgtca	tccaccactt	ctactgtgct	540
gacccccctc	tcctggccct	ctcctgctct	gacacccaca	acaaagaaaa	gcagctcatg	600
atcttctctg	cagtaaatct	cactgggtcc	ctccttacca	tcttcattctc	ctacatttgc	660
atcctctttt	ccattataaa	aatccagtct	tccgagggca	agtgcagagc	attttccacc	720
cgtgectccc	acctcactgt	cgtcaccatc	ttttatggca	cactattttt	catgtacctg	780
cagcaaccaa	aagcggggaa	ttcatggaag	ccaaacaaag	tagtctctgt	gttttatagt	840
cttgtaattc	ccatgcttaa	ccctcttata	tatcgctga	gaaacacaga	agtaaaggat	900
gccctgaaaa	aaatgctaga	gggcaaaag	ttatagttag	tgagt		945

<210> 296

<211> 605

<212> DNA

<213> Unknown (H38g145 nucleotide)

<220>

<223> Synthetic construct

<400> 296

atgacaacac	accgaaatga	cacctctcc	actgaagctt	cagacttctc	cttgaattgt	60
tttgtcagat	ccccagctg	gcagcactgg	ctgtccctgc	ccctcagcct	ccttttcttc	120
ttggccgtag	gggccaacac	cacctctctg	atgaccatct	ggctggagge	ctctctgcac	180
cagccccctgt	actacctgct	cagcctcctc	tccaaactgg	acatcgtgct	ctgcctcact	240
gtcatcccca	aggctcctgac	catcttcttg	tttgacctca	ggcccatcag	cttccctgcc	300
tgcttctctc	agatgtacat	catgaattgt	ttcctagcca	tgagatcttc	cacattcatg	360
gtcatggcct	atgatcggtta	tgtagccatc	tgccaccac	tgagatatcc	atcaatcatc	420
actgatcact	ttgtagtcaa	ggctgccatg	tttattttga	ccagaaatgt	gcttatgact	480
ctggccatcc	ccatcctttc	agcacaaactc	ttattgggaa	caatgttttt	aaaaccattc	540
ttggcaaatg	ttttgttcac	aatttctgcg	gagatgcacc	ttaataacct	tacacatttc	600
tgaag						605

<210> 297

<211> 609

<212> DNA

<213> Unknown (H38g146 nucleotide)

<220>

<223> Synthetic construct

<400> 297

atgaatgaga	caaattcattc	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagtcca	60
agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcattcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttctgc	taccctaaa	240
atgattgcag	actttctggt	tgagcacaag	actatttctt	ttgatgceca	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgtatatag	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgtgc	tcgtctcat	ttctgtgttt	gtgggttcca	tccataccac	cagccagttg	480
gcattcacgt	taatctgcca	ttttgtggte	ctaataaggt	agatagtttt	tttctgtgac	540
cttcctctag	cgctgaagtt	agcctgcata	gacacttatg	ttgtcagcct	actaatagtt	600
gcagatagt						609

<210> 298

<211> 912

<212> DNA

<213> Unknown (H38g147 nucleotide)

<220>

<223> Synthetic construct

<400> 298

atggcactta	gcaattccag	ctggaggcta	ccccagcctt	cttttttcct	ggtaggaatt	60
ccgggttag	aggaaagcca	gcaactggatc	gcactgcccc	tgggcatcct	ttacctcctt	120
gctctagtgg	gcaatgttac	cattctcttc	atcatctgga	tggacccatc	cttgacacaa	180
tctatgtacc	tcttcctgtc	catgctagct	gccatcgacc	tggttgtggc	ctcctccact	240
gcacccaaag	cccttgcaat	gctcctgggt	cgtgcccagg	agattgggta	caactgtctgc	300
ctgatccaga	tgttcttcac	ccatgcattc	tcctccatgg	agtcaggggt	acttgtggcc	360
atggctctgg	atcgctatgt	agccatttgt	cacccttgcc	accattccac	aatcctgcat	420
ccagggttca	tagggcacat	cggaaatggg	gtgctgggtg	ggggattact	actcctcatc	480
cccttcctca	ttctgtttgc	aaaacttata	ttctgccagg	ccaccatcat	aggccatgcc	540
tattgtgaac	atatggctgt	tgtgaaactt	gcctgctcag	aaaccacagt	caatcgagct	600
tatgggctga	ctgtggcctt	gcttgtgggt	gggctggatg	tcctggccat	tgggtgttcc	660
tatgccacac	ttctccaggc	agtgtggaag	gtaccaggaa	atgaggcccg	acttaaggcc	720
tttagcacat	gtggctctca	tgtttgtgtc	atcctgggtc	tctatatccc	gggaatgttc	780
tccttcctca	ctcaccgctt	tggtcacatc	gtaccccatc	acgtccatgt	tcttctggcc	840
atactgtatc	gccttgtgcc	acctgcactc	aatcctcttg	tctatagggt	gaagaccacg	900
aagatccacc	ag					912

<210> 299

<211> 330

<212> DNA

<213> Unknown (H38g148 nucleotide)

<220>

<223> Synthetic construct

<400> 299

agtcacacag	aaccacagaa	tctcacaggt	gtctcagaat	tccttctcct	gggactctca	60
gaggatccag	aactgcagcc	tgtcctcgct	tggtgtcctt	tgtccattta	cctggtcaca	120
gtgctgggga	acctgctcat	catcctgggt	gtcagctctg	actcccacct	ccacaccccc	180
atatacttct	tcctcttcaa	cctgtccttg	gctgacattg	gtttcacctc	ggccatgggt	240
cccaagatga	ttgtggacat	gcaatcgcat	agcagagtca	tctcttatgc	gggctgcctg	300
acatagatgt	ctttctttgt	cctttttttt				330

<210> 300

<211> 980

<212> DNA

<213> Unknown (H38g149 nucleotide)

<220>

<223> Synthetic construct

<400> 300

tttttttcca	ataattctgt	tctcttccca	catactttct	tcctggctgg	catcccagga	60
ttgactgcca	cccacatttg	gatttttactt	cccttttgct	ttatgttttt	cctgtcattg	120
actgggaatg	gtgtcctgct	ttttctcatc	cggacagaat	gcagccttcg	ccagcccatg	180
tttctttttc	ttgccatgct	ctcctttgtc	gacttgggtc	tctctctctc	cacactgcct	240
aagatgctgg	ccattttctg	gtttgggtgt	acagccatca	gctcgcattc	ctgtctttcc	300
catatgttct	tcattccatgc	attctctgcc	atggagttag	gggtgctagt	ggccatggcc	360
ctggaccgct	ctgtggccat	ctgcaaccca	ctgcgttatg	caaccatcct	tccacctgtt	420
gttgttgcca	agattggagg	cctgggtggg	ttgtgagggg	tgggattgac	catctccttt	480
ccaagcttgg	cccataggct	gcactaccat	ggctcacaca	tgattgccta	tacctctgt	540
gagcatatgg	cagtggtgaa	gcttgccctg	gaggccacca	ctgtggacaa	cctctatgcc	600
tttgtgttgg	caatctttct	tgggtggggg	gatgtgggtc	tattgcctat	tcttatgggc	660
tgattgtgag	gactgtaatg	catttttcctt	cacctgagga	acgtgcgaaa	gcaggcagca	720
catgtacagc	ccatgtctgt	gtcatcctct	tcttctatgg	actgggcttt	ctttctgtgg	780
tcattgcagc	ctttggagca	cccacagctt	ctactgccaa	ggtcatcctt	gccaatctct	840
acttgctctt	tccccagca	ctggatccca	ttgtctatgg	catggagacc	aagcagatct	900

aggagcggct attgatgatt ctaagcccca agcagattga gcttacctga gtatagttat 960
caccagctgg acttcagggt 980

<210> 301
<211> 721
<212> DNA
<213> Unknown (H38g150 nucleotide)

<220>
<223> Synthetic construct

<400> 301
cttagacaac ttcacaacct ttttcttcct gttggatttt ttctttcttt tactcctttt 60
aagttatatg cataatctaa attctgtgac taaattttcc agtaaaacag atgaatcaaa 120
gctcaaaagc taatgtaaag tcaaattctct tttctttacc tatgctggat gctgtgagaa 180
actactgctt gctgtagaaa agagagatct tcctttttgt tcattcattt cctccttcac 240
tagtcaactg ctgtttctga ccatgccaag gtggaacctg gagtaggaag gagagagaga 300
gggtaaggga agtctcattg actgacgcta aaataagatg gcttcacatt ttctggctct 360
ggccaatgtt tactatttct tactcatatt aaacctctct gaatgcattt aaccatggga 420
gcaagtcttc tccccgaggt gcgtcccca gatttctttc agttcccagt ggtcccat 480
aatctctcac agctggacgt tcaactcagta tgtaagacta ccatcttggg tacaatccct 540
ttcaaagcaa ctaaccact ttagtttcca tggccagtc ttcaaactct catatatctg 600
actagctata agtggagctg taactcccat tttgctgcaa agaccacggg gccagagttc 660
ggttgacgtc tgacatatcc ctgatgacag gatacacaca ttaaaacctc tgagtggccc 720
c 721

<210> 302
<211> 939
<212> DNA
<213> Unknown (H38g151 nucleotide)

<220>
<223> Synthetic construct

<400> 302
atggcatctc ccaacaatga ctccactgcc ccagtctctg aattcctcct catctgcttc 60
cccaacttcc agagctggca gcaactggtg tctctgcccc tcagccttct ctctcctctg 120
gccatgggag ctaacaccac cctcctgac accatccagc tggaggcctc tctgcaccag 180
cccctgtact acctgctcag cctcctctcc ctgctggaca tcgtgctctg cctcaccgtc 240
atccccaagg tcttgcccat ctctctggtt gacctcaggt cgatcagctt cccagcctgc 300
ttcctccaga tgttcacat gaacagtttt ttgaccatgg agtcctgcac gttcatggtc 360
atggcctatg accgttatgt ggccatctgc catccattga gatacccgtc tatcatcact 420
gaccagtttg tggctagggc cgtgggtctt gttatagccc ggaatgcctt tgtttctctt 480
cctgttccca tgctttctgc caggctcaga tactgtgcag gaaacataat caagaactgc 540
atctgcagta acctgtctgt gtccaaactc tcttgtagt acatcacttt caatcagctc 600
taccagtttg tggcaggctg gactctgttg ggctctgac ttatccttat tgttatctcc 660
tattctttta tattgaaagt tgtgcttagg atcaaggccg aggggtgctg ggccaaggcc 720
ttgagcacgt gtggttccca ctccatcctc atcctcttct tcagcacagt cctgctgggt 780
ctggtcatca ctaacctggc caggaagaga attcctccag atgtcccat cctgctcaac 840
atcctgcacc acctcattcc cccagctctg aaccccatg tttatggtgt gagaaccaag 900
gagatcaagc aggggaatcca aaacctgctg aagaggttg 939

<210> 303
<211> 405
<212> DNA
<213> Unknown (H38g152 nucleotide)

<220>
<223> Synthetic construct

<221> misc_feature

<222> (1)...(405)

<223> n = A,T,C or G

<400> 303

aaagatttgt	gaaggagaag	taatattaac	tttagaatag	aaagtattat	atTTTTTTTat	60
ataggggttg	gagagangat	gggtttatga	aattaattgt	taatgttttg	tgaaagtttt	120
taatgataaa	aaactgtgtt	aaggattaag	ggtgagggag	atatggccaa	agctctaggt	180
acttgtgggt	cccacttcat	cctcatcctc	ttcttcacca	cagtcttgct	ggttctggtc	240
atcactaacc	tggccaggaa	gagaattcct	ccagatgtcc	ccatcctgct	caacatcctg	300
caccacetta	ttccccagc	tctgaacccc	attgtttatg	gtgtgagaac	caaggagatc	360
aagcagggaa	tccagaacct	gctgaggagg	ttgtaaaaaa	taaaa		405

<210> 304

<211> 960

<212> DNA

<213> Unknown (H38g153 nucleotide)

<220>

<223> Synthetic construct

<400> 304

atggctccga	ccaacctcac	atctgcccc	gtgttccctc	tctcggcct	ggtggacgga	60
acagacagac	gcccaccgc	tgctgttctt	gctctgcctt	ggcatctatc	tgctcaacgc	120
cctgagcaac	ctgagcatgg	tggcgctggg	gagatctgac	ggggccctcc	gctcccccat	180
gtattacttc	ttgggtcacc	tgagcctcgt	ggacgtctgc	tttaccaccg	tcacgggtccc	240
caggctgctg	gccggcctgc	tccacccggg	ccaggccata	tcttccagg	cgtgctttgc	300
cgagatgtac	ttcttcgtgg	ctctgggcat	caccgagagc	tacctcccg	cggccatgtc	360
ctacgaccgc	gcgacggcgg	cgtgccggcc	cctgcgctac	ggcgcgctgg	tgacgccatg	420
ggcgctgcgc	ctcgctgggt	cgtgcgctgt	gggcggtgac	gcacctgcac	tcgctgctgc	480
acacgctgct	cctctccgcg	ctctcctacc	cctacccacc	ccccgtgcgc	cccttctttt	540
gcgacatgac	ggtgatgctg	agcttggcga	cctcggacac	gtccgcgcgc	gagacggcca	600
tcttctccga	gggcctggcc	gtggtgttgg	ccccgctgct	cctcgtgttc	cttttcttac	660
gcgcgcatec	tggtcgcggg	gctcggcttg	ccgcggccgg	cgcgcgcctt	tctccacctg	720
cggggccccc	ctagtggcgg	tggcgggtgg	ggtggcgctt	ttctttgggt	ctgtcctctc	780
cgtgtatttc	ccgcgcgtcg	ctgcctactc	agcccgttac	gaccgcctgg	ccagcgtggg	840
ctacgctgtc	atcacgccga	ccttgaaccc	tttcatcaac	agccttcgca	acaaagagg	900
caagggcgcc	ctgaaaagg	ggctcagatg	gagggctgca	ccccaagagg	cgtgagggca	960

<210> 305

<211> 975

<212> DNA

<213> Unknown (H38g154 nucleotide)

<220>

<223> Synthetic construct

<400> 305

atgttccctc	ccaataacac	ccagtttcac	ccctcctcct	tctgtttgct	ggggatccca	60
gggctagaaa	cacttcacat	ctggatcggc	tttccctttt	gtgctgtgta	cataattgca	120
ctcatagggc	gcttcactat	tctacttgtg	atcaagactg	acagcagcct	ataccagccc	180
atgtttctact	tcctggccat	gttggccacc	attgacttgg	gcctttcaac	agctaccatc	240
cctaagatgc	ttgggatctt	ctggtttagc	ctcaggggaga	ttatctgtga	tgccctgcctc	300
atccagatgt	ttttcatcca	caactttact	ggcatggagt	cagcagccct	cgtgggaatg	360
gcttatgacc	actttgtggc	catctgcaac	ccgctacgat	atagcatcat	cctcaccaaa	420
aaggctgttt	ctgtgattgg	tcttgggtgtg	ttagtgaggt	catttatgtc	tgttattcca	480
tttgtttttc	tcatttttgc	gttgcccttc	tgtggggatc	atgtcattcc	ccacaccaac	540
tgtgagcaca	tgggtcctgc	tcatctgtct	tgttccagta	tcaagatcaa	tataatctat	600
ggcttgggtg	ctatttcaat	cctagtattc	gacatcatag	ccattgccct	ttcttatgtg	660
caaatacttc	acgctgtttt	ccatcttctc	tctgtaaaag	cctgactcaa	gtccctcagc	720
acatgtgggt	cacatgtgtg	tgtaatcctt	gccttctata	caccagccct	cttttccctt	780
gtgactcatc	gctttggcca	aaatgtgccc	cgctatatcc	atatactcct	agccaatctc	840

tatgttgtgg	tgccaccaat	gctcaatcct	gtcatatatg	gagtcagaac	caagcagatc	900
tatgtctgtg	tgaagaatat	attcttacia	aaataagaaa	ttgaaaagaa	atcgcatcta	960
atacatataa	gaagg					975

<210> 306

<211> 957

<212> DNA

<213> Unknown (H38g155 nucleotide)

<220>

<223> Synthetic construct

<400> 306

atgtctcttc	ttaatgacac	aaaaatggaa	gtccttagat	tctctcttat	cgggatcact	60
ggactggaga	aaagtgcac	ctggatatcc	attcctttct	tatctgtgta	ccttctttct	120
tggatgggta	attttaccgt	cctctttttt	atcaagacag	agcaaagcct	ccatgaacct	180
atgtattatt	tgctttccat	gctctccatc	tctgacctag	ggctgtctct	gtcttccctta	240
cccatcactt	tgggactatt	cctatttgat	gtccatgaaa	ttcatgcagc	tccatgcttt	300
gcctaggaat	tttttatcca	tctgtttaca	gtcagtgaag	cctctgtact	gtctgtaatg	360
gcatttgact	ggtatgtggc	aatccacagt	cctttgagat	acagcactat	cttaactagt	420
cccagagcca	tcaaaacagg	ggttcttctg	acttccaaga	atgttctttt	gatccttcca	480
ctgccctttc	tcttgcaaa	gctgagatat	tgctcatcaa	acctgtctct	ccactcctat	540
tgctctccacc	aggatgtcat	gaagctgatg	tggtctgaca	acacagtcaa	tggtgtctac	600
ggactctgtg	caggactttc	tactatgctg	gaacttggtg	tgattacctt	ctcctaaatt	660
atgattttta	gggctgtact	gggaattgct	acccccagac	agcagttcaa	ggccctcaac	720
acgtgcatct	ctcacatctg	tgctgtgctt	atcttctatg	tgcccacgct	gagtgctgcc	780
atgtctccacc	agtttgccag	ggatgtgtct	cctatgatcc	acgtcctcat	ggctgatatt	840
tttctgtctg	tgccacccct	gttgaatccc	atcgtgtact	gtgtgaagac	ccaccaaate	900
cgagaaaagg	ttgtggggaa	actttgtcca	aaagtaagtt	gatcaaagga	atgagaa	957

<210> 307

<211> 939

<212> DNA

<213> Unknown (H38g156 nucleotide)

<220>

<223> Synthetic construct

<400> 307

atgtccatta	tcaacacatc	atatgttgaa	atcaccacct	tcttcttgg	tgggatgcca	60
gggctagaat	atgcacacat	ctggatctct	atccccatct	gcagcatgta	tcttattgct	120
attctaggaa	atggcaccat	tctttttatc	atcaagacag	agccctcctt	gcatgagccc	180
atgtactatt	ttctttccat	gttggtctatg	tcagacttgg	gtttgtcttt	atcatctctg	240
cccactgtgt	taagcatctt	cctgttcaat	gtcctgaaa	tttcatccaa	tgccctgcttt	300
gcccaggaat	tcttcattca	tggattctca	gtactggagt	cctcagtcct	cctgatcatg	360
tcatttgata	gattcctagc	catccacaac	cctctgagat	acacctcaat	cctgacaact	420
gtcagagttg	cccaaataag	gatagtattc	tcctttaaga	gcatgctcct	ggttcttccc	480
ttccctttca	ctttaagaaa	cttgagatat	tgcaagaaaa	accaattatc	ccattcctac	540
tgtctccacc	aggatgtcat	gaagttggcc	tggtctgaca	acagaattga	tggttatctat	600
ggcttttttg	gagcactctg	ccttatggta	gactttattc	tcattgctgt	gtcttacacc	660
ctgatcctca	agactgtacc	gggaattgca	tcacaaaagg	agcagcttaa	ggctctcaat	720
acttggtgtt	cacacatctg	tgcatgtatc	atcttctacc	tgcccatcat	caacctggcc	780
gttggtccacc	gctttgccc	gcatgtctct	cccctcatta	atgtttctcat	ggcaaattgtt	840
ctcctacttg	tacctccact	gacgaaccca	attgtttatt	gtgtaaaaac	taaacagatt	900
agagtggagag	ttgtagcaaa	attgtgtcaa	cggaagatt			939

<210> 308

<211> 925

<212> DNA

<213> Unknown (H38g157 nucleotide)

<220>

<223> Synthetic construct

<400> 308

atggtgaata	gaaacaatgt	gacagagttt	attctactgg	ggcttataga	gaatccaaaa	60
atgcagaaaa	tcatatttgt	tgtgttttgt	catctacatc	accaccatga	taggaaatgt	120
gctcattgtg	gtcaccgtca	ctgccagccc	atcattgagg	tcccccatgt	actttttacct	180
ggcctatctg	tcctttattg	atgcctgcta	ttcctccgtc	aatgccccta	agctgatcac	240
agattcactc	tatgaaaaca	agactatctt	actcaatgga	tgtatgactc	aagtctttgg	300
agaacatttt	ttcggagggtg	ttgagggtcat	cctacttact	gtaatggcct	atgaccgcta	360
cgtgggtcatc	tgcaagccct	tgcactatac	caccatcatg	aagcagcatg	tttgtagcct	420
gctagtggga	gtgtcatggg	taggaggcct	tcttcatgca	accgtacaga	tcctcttcat	480
cttccaatta	cctttctgtg	gtcctaattg	catagatcac	tttatgtggg	atctcaaccc	540
tttgctcaat	cttgtctgca	ctaataccca	cactctagga	ctcttcgttg	ctgccaacag	600
tgggttcata	tgctgttaa	actttctctt	gctcctggtc	tcctatatgg	tcatactgta	660
ctccttaagg	accacagct	tagaggcaag	gtgcaaagcc	ctctccacct	gtgtctccca	720
catcacagtt	gtcatcttat	tctttatacc	ctgcataatt	gtgtacatga	gacctccagc	780
tactttaccc	attgataaag	cagttgctgt	attctacact	atgatagctc	ctatgttaaa	840
ccccttaatc	tacaccttga	ggaatgctca	gatgaaaaat	gccattagga	aattgtgtag	900
taggaaagct	atttcaagtg	tcaaa				925

<210> 309

<211> 963

<212> DNA

<213> Unknown (H38g158 nucleotide)

<220>

<223> Synthetic construct

<400> 309

atggcatacc	atggcaacag	gggcactttt	caccagcca	cattttttct	cattggaatc	60
ccaggctctg	aagacgtcca	tatgtgaatc	tcctgcact	tctgctctgt	ttaccttttg	120
gctttgctgg	gaaatgctac	cattctgcta	gtcatcaagg	cagaacagac	cctccgggag	180
cccatgttct	actttctggc	catcctttcc	acaattgatt	tggcccttcc	tacaacctct	240
gtgcctcgta	cgctgggtat	cttctggttt	gatgctcatg	agattaactt	tggagcatgt	300
gtggcccaga	tgtttctgat	ccatgccttc	actggcatgg	aggctgaggt	ctgggtggcca	360
tggcctttga	ccgttacgtg	gccatctgca	atccacttca	ctacacaaac	atcttgacat	420
cccggtgtct	ggtgggcata	actatgtgca	ttgtaattcg	tccagttctg	tttactctcc	480
cgataatcta	tctcatctac	cgttttaccat	tttggtcagg	gtcatataaa	tagccccattc	540
ctactatgag	cacatgggca	ttgcaaaatt	gtcctgtgga	aacatccgtg	tcaatgctat	600
ctatgggctc	tttgtggtct	cctctatctc	ctgaacctgg	tccttattgt	tatctcatat	660
gtgtacattc	tctgtgctgt	cttctgcctc	gcacacatg	atgctcggct	aaaagcccta	720
agcaacatgt	ggctctcatg	ttgggggtcat	ctgtgttttc	tatatcccg	cggactcttc	780
tttctactc	attgatttgg	acacaacatt	ccacattaca	tgcacattct	tgttgctact	840
ctctatttgg	ttatcccacc	ctctctcaac	cccatcattt	gtgggggtgag	gaccaaattgg	900
aaacgagagc	gagtgtctcta	tgtacttact	aaaaaataag	attctgacca	tgttctttta	960
cta						963

<210> 310

<211> 483

<212> DNA

<213> Unknown (H38g159 nucleotide)

<220>

<223> Synthetic construct

<400> 310

ggcacagtgt	agatcctctc	cccagttctga	cttcctttct	atgatcccaa	tgtcatagct	60
cattcatgtg	tgacttaaac	actttgttga	aactcctctg	catgggtact	actaatacac	120
ttggtttctt	tgttgctgcc	aatgggtgggt	tcaactacct	attaaacatc	attttcttga	180
tggtttctta	agtggccatc	ctatgtactt	tgaaaactca	cagcttgagg	gaaagatgct	240

aaagccctct	ctacctgcat	ctctcacacc	accgtgggtca	tcttatcttt	gggttctgta	300
tatctgtgta	tctgtgcccc	gtgacccttc	cccaatcaat	aaagcagtgg	ctgtgtttta	360
taccatgata	aatcctatgt	taaaaccttt	agtctaacc	tcagaaatgc	agaggtgaaa	420
agtgccttga	gaaagctctg	ggtcaaaaaga	tgaactgaag	agagaaataa	tccaaacata	480
aga						483

<210> 311

<211> 933

<212> DNA

<213> Unknown (H38g160 nucleotide)

<220>

<223> Synthetic construct

<400> 311

atgtttttatc	acaacaagag	catattttcac	ccagtcacat	ttttcctcat	tggaatccca	60
ggctctggaag	acttccacat	gtggatctcc	gggcctttct	gctctgttta	ccttgtggct	120
ttgctgggca	atgccaccat	tctgctagtc	atcaaggtag	aacagactct	ccgggagccc	180
atgttctact	tcctggccat	tctttccact	attgatttgg	ccctttctgc	aacctctgtg	240
cctcgcatgc	tgggtatctt	ctggtttgat	gctcacgaga	ttaactatgg	agcttgtgtg	300
gccagatgt	ttctgatcca	tgccttcaat	ggcatggagg	ctgaggctct	actggctatg	360
gcttttgacc	gttatgtggc	catctgtgct	ccactacatt	acgcaaccat	cttgacatcc	420
ctagtgttgg	tgggcattag	catgtgcatt	gtaattcgtc	ccgttttact	tacacttccc	480
atggctctatc	ttatctaccg	cctacccttt	tgtcaggctc	acataatagc	ccatttctac	540
tgtgagcaca	tgggcattgc	aaaattgtcc	tgtggaaaca	ttcgtatcaa	tggatatctat	600
gggctttttg	tagtttcttt	ctttgttctg	aacctgggtgc	tcattggcat	ctcgtatgtt	660
tacattctcc	gtgctgtctt	ccgcctccca	tcacatgatg	ctcagctaaa	agccctaagc	720
acgtgtggcg	ctcatgttgg	agtcactctg	gttttctata	tcccttcagt	cttctctttc	780
cttactcatc	gatttggaca	ccaaatacca	ggttacattc	acattcttgt	tgccaatctc	840
tatttgatta	tcccaccctc	tctcaacccc	atcatttatg	gggtgaggac	caaacagatt	900
cgagagcgag	tgctctatgt	ttttactaaa	aaa			933

<210> 312

<211> 946

<212> DNA

<213> Unknown (H38g161 nucleotide)

<220>

<223> Synthetic construct

<400> 312

atggagaata	ggaataacgt	gacagagttt	gttttactag	ggcttacaga	gaatccaaag	60
atgcagaaaa	tcatatttgt	tgtgtttttt	tgtcatctat	atcatcactg	tggtgggaaa	120
tgcgtcatt	gtggtcacca	tactgccag	cccatcactg	gggtcccca	tgtacctttt	180
cctggcctat	ctctccttta	tagatgcctg	ctattcttct	gtcaataccc	ctaagctgat	240
cacagattca	ctctatggaa	agaacaccat	cctattcaat	ggatgcatga	ctcaagtctt	300
tggagaacat	ttcttcggag	gtgcagaggg	tatcctactt	actgtgatgg	cctatgaccg	360
ctatgtggcc	atctgcaagc	ccttgcaacta	tatgactatc	atgaaccagt	gtgtgtatgc	420
cctgctaagt	ggagtgggtg	ggatgggagg	ctttcttcat	gcaaccatac	agatcctctt	480
catcttccaa	ttacctttct	gtggtcctaa	tgtcatagat	cactttatgt	gtgatctgaa	540
ccctttgctc	aacctcgctt	gcactgacac	ccatagtctg	ggactcttca	ttgctgccaa	600
cagtggattc	atctgcttgt	taaactttgt	cctcctgctg	gtctcctatg	tggatcatctt	660
gcgtcccta	aggactcaca	gcttggaggc	aaggcaciaa	gccctctcca	cctgtgtctc	720
ccacatcaca	gttgatcatc	tattctttgt	gccctgcata	tttggtgtaca	tgagacctgc	780
agctacttta	cctattgata	aagcagttgc	tatattctac	actatgataa	ctcctatgtt	840
aaacccctta	atctatacct	tgaggaatgc	ccagatgaaa	aatgccatca	ggaaattgtg	900
tagtagaaag	gacattttcag	gtaacaaata	aatgtaacta	gagctc		946

<210> 313

<211> 966

<212> DNA

<213> Unknown (H38g162 nucleotide)

<220>

<223> Synthetic construct

<400> 313

tcaaatactg	ggatgtccat	tctcaatacc	tctgaaatgg	aaatctctat	tttctacttg	60
gttgggatcc	caggtttggg	gcatgccaat	atttggatct	ctatcccat	atgtctcatg	120
tacactgttg	ctatcctagg	gaattgtacc	attctgtttt	tcataaaaac	agagccttct	180
ttgcatgagc	ccatgtacta	ttttctctcc	atgttggtcc	tctctgacct	gggactatcc	240
ctctcctctc	tccttaccat	gttaaggatt	ttcctgttca	atgtccagg	aatttcccct	300
gatgcctgta	ttgctcaaga	gtttttcatc	catggattct	cagctatgga	gtcatctgta	360
cttcttataa	tgctcttga	tcgctttatt	gccatctgca	accccttgag	atacacttcc	420
atcctcacca	gtgccagagt	cattcaaatt	gggcttgctt	tttctctcaa	aaatgttttg	480
ttgatcctcc	catttccttt	cactctaaaa	catctaaaaat	attgtaagaa	gaacctcctg	540
tcccaatcct	actgcctcca	tcaagatgtc	atgaaactgg	cctgcactga	caacaaggtc	600
aacatcatct	atggcttatt	tgtggctctc	acaggcatcc	tagacttgac	atttattttc	660
atgtcctaca	tggtgatact	gaaagcagtg	ttgagcatag	catcatgaaa	gaaaaggctc	720
aaggctctca	atacatgtgt	ttccacatc	tgtgctgtgc	tcattcttcta	tgtgcccatt	780
atctccctag	ctgtcatcta	ccggtttgcc	aaacacagtt	tcccaatcac	taggatcctc	840
atagctgatg	ctttctgtct	ggtgcctcca	ttgatgaacc	ccattgtata	ctgtgtgaag	900
agccagcaga	taagaaatct	tgtcttagaa	aaactgtgcc	agaagcaaag	ctgaagcgga	960
tgttta						966

<210> 314

<211> 961

<212> DNA

<213> Unknown (H38g163 nucleotide)

<220>

<223> Synthetic construct

<400> 314

agtcacacag	agccacagaa	tctcacaggt	gtctcagaat	tcctcctcct	gggactctca	60
gaggatccag	aactgcagcc	actccttgct	gggctgttcc	tatccatgtg	cctgggtcacg	120
atgtctgggga	actgctcatc	atcctggccg	tcacctgac	tcccacctcc	acatcccat	180
gtacttcttc	ctctccaacc	tggtccttgg	ccatgcatt	gcgtttcacc	ttaggccacg	240
gtccccaaga	tgattgtaga	catgcaatca	catagcagag	tcattctcca	tgcaggctgt	300
ctgacacaga	tacctttctt	tgtccttttt	gtatgtatag	atgacatgct	cctgactgtg	360
atggcctatg	actgatttgt	ggccatctgt	cacccctgc	actaccaggt	catcatgaat	420
cctcacctct	gctgtcttct	tagtgttgat	gtcttttcc	tagcctgttg	gattcctagc	480
tgcacaactg	gattgttaca	attcacctgc	ttcaagaatg	tggaaatctc	taattttttc	540
tgtgactgat	ctcaacttct	caaccttgcc	tgttctgact	gtcatcagta	acatattcat	600
acatttagat	agtactatat	ttggttttct	tcccatttca	gggatccttt	tgtcttacta	660
taaaattgtg	ccctccattc	taagaattcc	attgtcagat	gggaagtata	aagccttctc	720
cacctgtggc	tctcacctgg	caattgtttg	cttattttat	ggaacaggca	ttggcatgta	780
cctgacttca	gctgtgtcac	cagccccag	gaatgggtg	gtggcatcag	tgttgtacgc	840
tatgtcaccc	ccatgctgaa	ccccttcac	tgcagcctga	gaaacagggg	gcattcaaag	900
tgccctgtgg	aggctgtgca	ggaggaaagt	ctaattctcat	gatctgtttc	atcctttttc	960
t						961

<210> 315

<211> 960

<212> DNA

<213> Unknown (H38g164 nucleotide)

<220>

<223> Synthetic construct

<400> 315

atgcgtctca	tatgagatga	agaaatgtcc	agaagaaact	atactgaact	gacagaattt	60
------------	------------	------------	------------	------------	------------	----

gttctcttgg	gtctaacaag	cgtccagag	ctgaggtg	cttctcttggc	actgttcctt	120
tttgtctaca	tagccactgt	ggtaggaaac	ttggggatga	ttatttttaat	caaagttgat	180
tctcgacttc	acactcccat	gtaatttttt	ctctccagtt	tgtccattct	agatctgtgt	240
ttctccacaa	atttactcc	caaaatgcta	gaaaatttct	tatcagagaa	gaagaccatt	300
tcctatgcag	gttgtttgat	gcagtgcctat	gttgtcattg	ctgtggtcct	tgcagagcac	360
tgcattgttg	cagtcattggc	atatgaccgc	tatatggcca	tctgtaatcc	attgctctac	420
agtagcaaaa	tgtcccaagg	tgtttgtgtc	cacctggtea	ttgtccctta	tgtctatggc	480
tttcttctca	gtgtgatgga	aaccttaagg	acctacaacc	tctccttctg	tggacaacaa	540
gaaatcaacc	atttctactg	tgtgatcct	cctcttatca	aactggcatg	ctctgacacg	600
tacagcaagg	agctgtccat	gtacatagta	gccggctaca	gcaacgtcca	gtctcttctg	660
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ggaaggaaaa	aagctttttc	cacatgtggt	ttccacctga	cagttgtcac	aatcttctat	780
ggaaccctct	tctgcatgca	tttgagacgt	cccacagacg	agtccgtgga	gcaggggaaa	840
atggtggctg	tgttttacac	cacagtgata	ctcatgctga	actccatgat	ctatggcctc	900
aggaacaagg	atgtgaaaga	ggcgttgaaa	aaagcaatag	gaaaacaaac	attgggaaaa	960

<210> 316

<211> 947

<212> DNA

<213> Unknown (H38g165 nucleotide)

<220>

<223> Synthetic construct

<400> 316

aggaggatgg	gcaatcacac	tgcagtgagc	ctattccttc	tgtggggatt	ttccagtttt	60
tcagacctgc	agagtctact	ttttgtgggtg	attctcttct	acatgtgacc	atcctagctg	120
caaacgtgtc	cataatgggg	gccatcaagc	tcagccacaa	ccttcacact	cctatgtact	180
tttctctctg	tggcctgtcc	ttttcagaaa	cttgtaccac	tgtggtagta	atccctcgca	240
tgttgggtgga	ctttctatca	gagagcaaga	ccatttctct	tcttgagtgt	gccacacaga	300
tgtttttctt	tctgggcttt	gcatccaaca	actgtttcat	catggccgct	atgtcctacg	360
accgctacac	ggccatccac	aacctactgc	agtaccacac	ccttatgaca	agaaagatct	420
gcttgagat	gatgatggct	tcttggatgg	ttgggttctt	gttttctctg	tgcattcatg	480
tcactgtatt	caacttgtct	ctttgcgact	tgaacactat	ccagcactat	ttctgtgata	540
tctcaccagt	ggtctccctt	gcttgaatt	acactttcta	tcattgaaatg	gctatttttg	600
tgtctctctg	ctttgtgttg	gtgggcagct	gtattttaat	tatgatttcc	tatgtcttca	660
ttgtgttcat	agtcataaag	atgccctctg	caaaggggag	gtctaaggcc	ttctcaactt	720
gtctctccca	cctcactgtt	gtgtccatac	actatggatt	tgcttgcttt	gtctatttga	780
ggcccaagaa	cagcaactcc	ttcgatgaag	acatgctgac	ggccatgata	tatacaatac	840
tgatgcctct	gcttaacccc	atcgtgtaca	gtctgagaaa	caaagaaatg	cagatagccc	900
taagaaaaac	actaggcagt	gtattttgggg	ttttccctca	gaagaca		947

<210> 317

<211> 955

<212> DNA

<213> Unknown (H38g166 nucleotide)

<220>

<223> Synthetic construct

<400> 317

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gggttggaag	ctgtccacat	ctggatctcc	atcccccttt	gtgtgggtcta	cctgttggcc	120
ctactgggaa	acggctctct	tctgtttatc	atcaagacag	agcccagcct	ccatgagcca	180
atgtacctct	tcctatgcat	gctggctgta	gttgatcttg	ttgtgtgttc	tacagctgtg	240
cccaaacttc	tcagtctctt	ctggttccat	gatggagaga	ttcgctttga	aacctgcctc	300
actcgtgttc	ctgattcact	cttgcctcac	catggaatct	ggcttcttcc	tggccatggc	360
ttttggccga	tatgtggcca	tttgcaatcc	attaagacat	tcagctattc	tgacacgcgc	420
tgtaatggg	agagtggggc	tagctattgt	tctcaggggc	atagcacttc	tcagtcctca	480
ctcttttcta	ctacgctggc	ttccctactg	cagaacccat	atcatttctc	acacctactg	540
tgagttcatg	gccctcatca	ggattgcctg	tgctgagaca	aaattccgca	gagcctacag	600

cctcattggt	gccttcctta	ctgggggtggt	agactttata	ttgatcattt	attcttatgt	660
cctcatactc	cacactgtct	tccagctccc	atccaaagat	gcccggctca	aatctttggg	720
cacctgtggc	tcccatgtct	gtgtcatctt	agtatcctat	actccagcct	tcttctcggt	780
tctcacccac	aggtttgggc	accatgtggc	tccccatttt	cacatatattg	tggccaacat	840
ctatcttctt	gtcccaccca	tgggtgaaccc	cattatctat	ggggtaagaa	ccaaaaggat	900
ttgggacagg	ttccttaag	ttttcagttt	ttcaaagcct	ctaagtaaat	cattt	955

<210> 318

<211> 921

<212> DNA

<213> Unknown (H38g167 nucleotide)

<220>

<223> Synthetic construct

<400> 318

atgctcaatt	tcaccgatgt	gacagagttc	attctttttg	ggctaacgag	ccgtcgagaa	60
tggcaagttc	tcttcttcat	catctttctt	gtggtctaca	tcatacccat	gggtgggcaat	120
atcggcata	tgggtgtaat	caaggtcagt	cctcagctta	acaaccccat	gtactttttc	180
ctcagtcact	tgtcatttgt	tgatgtgtgg	ttttcttcca	atgtcacccc	taaaatgttg	240
gaaaacctgt	tatcagataa	aaaaacaatt	acttatgctg	gttggttagt	acagtgtttc	300
ttcttcattg	ctcttgtcca	tgtggaaaatt	tttattcttg	ctgcgatggc	ctttgataga	360
tacatggcaa	ttgggaatcc	tctgctttat	ggcagtaaaa	tgtcaagggt	tgtctgtatt	420
cgactgatta	ctttccctta	catttatggt	tttctgacga	gtctggcagc	aacattatgg	480
acttacggct	tgtacttctg	tggaaaaatt	gagatcaacc	atttctactg	tgcagatcca	540
cctctcatca	aaatggcctg	tgccgggacc	tttgtaaaag	aatatacaat	gatcatactt	600
gccggcatta	acttcacata	ttccctgact	gtaattatca	tctcttactt	attcactctc	660
attgccattc	tgcgaatgcg	ctcagcagaa	ggaaggcaga	aggccttttc	cacatgtggg	720
tcccatctga	cagctgtcat	tatattctat	ggtagctctga	tcttcatgta	tctcagacgt	780
cccacagagg	agtctgtgga	gcagggggaag	atggtggctg	tgttctatac	cacagtgate	840
cccattgtga	atcccatgat	ctacagtctg	aggaacaagg	atgtgaaaaa	ggccatgatg	900
aaagtgatca	gcagatcatg	t				921

<210> 319

<211> 966

<212> DNA

<213> Unknown (H38g168 nucleotide)

<220>

<223> Synthetic construct

<400> 319

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ttgaggtaca	ccgctaaaca	ttctagcctc	ttcttctctc	tcttctctct	catctacagc	120
atcactgtgg	ctgggaatct	cctcatcctc	ctaactgtgg	gctctgactc	tcacctcagc	180
ttacccatgt	accacttctc	ggggcacctc	tccttctctg	atgcctgttt	gtctacagtg	240
acagtgccca	aggtcatggc	aggcctgctg	actctggatg	ggaagggtgat	ctcctttgag	300
ggctgtgccc	tacagcttta	ttgcttccac	tttctggcca	gcaactgagt	cttctgttac	360
acagtcatgg	cctatgaccg	ctatctggct	atctgtcaac	ccctgcacta	cccagtggcc	420
atgaacagaa	ggatgtgtgc	agaaatggct	ggaatcacct	gggccatagg	tgccacgcac	480
gctgcaatcc	acacctccct	caccttccgc	ctgctctact	gtgggccttg	ccacattgcc	540
tacttcttct	gcgacatacc	ccctgtccta	aagctgcctc	gtacagacac	caccattaat	600
gagctagtca	tgtctgccag	cattggcatc	gtggctgcag	gctgcctcat	cctcatcggt	660
atttcttaca	tcttcatcgt	ggcagctgtg	ttgctcatcc	gcacagccca	gggccggcag	720
cgggccttct	ccccctgcac	tgccagctc	actgggggtgc	tctgtacta	cgtgccacct	780
gtctgtatct	acctgcagcc	tcgctccagt	gaggcaggag	ctggggcccc	tgtgtctctc	840
tacacaatcg	taactccaat	gctcaaccca	ttcatttaca	ctttgcggaa	caaggagggtg	900
aagcatgctc	tgcaaaggct	tttgtgcagc	agcttccgag	agtctacagc	aggcagccca	960
ccccca						966

<210> 320

<211> 967
 <212> DNA
 <213> Unknown (H38g169 nucleotide)

<220>
 <223> Synthetic construct

<400> 320
 aaaatgctca atttcaccga tgtgacagag ttcatctctt tggggctaac gagccgctcg 60
 gaatggcaag ttctcttctt catcggtttt cttgtggtct acattatcac cgtgggtgggc 120
 aatatcgga tgatgttggt aatcaagggt agtcctcagc ttaacagccc catgtacttt 180
 ttctcagtc acttgctcatt tgttgatgtg tgggtttctt ccaatgtcac ccctaaaatg 240
 ttggaaaatc tgttatcaga taaaaaaaaa aacaatttct tatgctggct gtttagcaca 300
 gtgtttcttc ttcatgtctc ttgtccatgt ggaaattttt attcttgctg cgattgcctt 360
 tgatagatac acagtgattg gaaatccttt gctttatggc agcaaaatgt caagggatgt 420
 ctgtattcga ctgattactt tcccttacat ttatgggttt ctgacgagtc tgacagcaac 480
 attatggact tatggcttgt acttctgtgg aaaaattgag atcaaccatt tctactgtgc 540
 agatccacct ctcatcaaaa tggcctgtgc cgggaccttt gtaaaagaat atacaatgct 600
 catacttgcc ggcatacaact tcacatatct cctgactgta attatcatct cttacttatt 660
 catctcatt gccattctgc gaatgcgtc agcagaagga aggcagaagg ccttttccac 720
 atgtgggtcc catctgacag ctgtcatcat attctatggt actctgatct tcatgtatct 780
 cagacgtccc acagaggagt ctgtggagca ggggaagatg gtggctgtgt tctataccac 840
 agtgatcccc atgttgaatc ccatgatcta cagtctgagg aacaaggatg tgaaaaaggc 900
 catgatgaaa gtgatcagca gatcatgtta aacaaaataa aatcaagttt gaattaattt 960
 tgtcttc 967

<210> 321
 <211> 933
 <212> DNA
 <213> Unknown (H38g170 nucleotide)

<220>
 <223> Synthetic construct

<400> 321
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 ctggacgccc tctcttttgg aatcttctct gtggtttacg tgctcactgt gctgggggaa 120
 ctctcatcc tgcgtggtgat caggggtgat tctcacctcc acaccccat gtactacttc 180
 ctcaccaacc tgtccttcat tgacatgtgg ttctccactg tcacgggtgc caaaatgctg 240
 atgaccttgg tgtccccaag cggcagggct atctccttcc acagctgcgt ggctcagctc 300
 tattttttcc acttctctgg gagcaccgag tgtttcctct acacagtcac gtcctatgat 360
 cgctacttgg ccatcagtta cccgctcagg tacaccagca tgatgagtgg gagcaggtgt 420
 gccctcctgg ccaccggcac ttggctcagt ggctctctgc actctgctgt ccagaccata 480
 ttgactttcc atttgcccta ctgtggaccc aaccagatcc agcactactt ctgtgacgca 540
 ccgccatcc tgaactggc ctgtgcagac acctcagcca acgtgatggc catctttgtg 600
 gacattggga tagtggctc aggctgcttt gtctgatag tgctgtccta tgtgtccatc 660
 gtctgttcca tctgcggtat ccgcacctca gatgggaggg gcagagcctt tcagacctgt 720
 gcctcccact gtattgtggc cctttgcttc tttgttccct gtgttgctcat ttatctgagg 780
 ccaggctcca tggatgccat ggatggagtt gtggccattt tctacactgt gctgacgccc 840
 cttctcaacc ctgttgtgta caccctgaga aacaaggagg tgaagaaagc tgtgttgaaa 900
 cttagagaca aagtagcaca tctcagagg aaa 933

<210> 322
 <211> 953
 <212> DNA
 <213> Unknown (H38g171 nucleotide)

<220>
 <223> Synthetic construct

<400> 322

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ggagttggat tgtaaaaact ttgatggcaa attatatctt cccgagactc tttctcaaca      60
tgggaaatgt tttctctctc aattttacaa cttccttaga tgtacactgt ggccctctca      120
gggacatcta ttctgatttt cttgatttag acagatttct gagttcacac atcattgtac      180
tctttctgag ttctcattga tatagccatt tctgttggtt aaattgggtat tgagggtttc      240
tctggaaaga taaactttct acatactggg tgtggaaact agattttctt ctttctgact      300
gctggcattt tcaaatatgt ctttctcact tatatggctt atgaccataa cgtggctatc      360
tgtgcctgag tgaccaacct tcatgagtga tcaggtcttc tagcaatggg cagtagagtc      420
ttggattgga ggaaaacttt cttctttggc tcataccatt tatatttttc atttattcag      480
ctataaagca aaggagatta gccacttatg gcccagctc ttttaaagct cctctgtggg      540
gatccccatg atacaaaatg atgttttttt cacaataatt acattcttgt tcaccctgct      600
tctcttact ctgaccttat cctccaagct tattgtgttc actatcctac acatgaactc      660
ctcaaatggg ggagcaaagt cttggccaca tactgctttc atctgagtgt gctgattccc      720
tgctgtggcc agggcacttc gtctacatga cttccagctc cttctgaact gtaaacaat      780
accagaccat gtctgcttga cagcataatt atatccacgt tgaaaccctt gatagacatt      840
ctgaagaatg cagaagtggc aggagcttgg agcaagtctt tgtaaaagaa agcgctaaaa      900
agtcaacacc ttattatcgt agctgtgaaa ataaataaac aacagagcag agt          953

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<210> 323

<211> 960

<212> DNA

<213> Unknown (H38g172 nucleotide)

<220>

<223> Synthetic construct

<400> 323

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ttgggattaa aggatcttcc agagcttcag cccatcctct ttgtactgtt cctgctaata      120
tacctgatca ctgtcggggg gaaccttggg atgttggtgt tgatcaggat agattcacgc      180
ctccacaccc ccatgtattt ctttcttgct agtttgctct gcttggattt gtattactcc      240
actaatgtga ctcccaagat gttggtgaa tttctctcag acaagaaagc catttccat      300
gctgcttgtt tagtccagtg ctattttttc attgctgtgg tgattactga atattatatg      360
ctagctgtaa tggcctatga taggtatgtg gccatctgta accctttgct ttacagcagc      420
aagatgtcca aagggtctctg tattcgctctg attgctgggc catatgtcta tgggtttctt      480
agtggactga tggaaacatg gtggacatac cacttgacct tctgtggctc caatatcatt      540
aatcacttct actgtgctga cccacccctc atccgacttt cctgctctga cactttcatt      600
aaggaaacat ccatgtttgt ggtagcatga tttaacctct ccagctccct catcataatc      660
ctcatctcct acatcttcac tctcattgcc atcctgagga tgcgttctgc tgaaagttagg      720
cgcaaagcgt tctccacctg cgggtcccac ctgggtggcag tgactgtgtt ttatggaacc      780
ctgtttctgca tgtacgttag acctcccacg gacaggtcag tggaaacagtc caaagtcatt      840
gctgttttct acacttttgt aagccctatg ttgaacccca tcatctatag tttgaggaac      900
aaggatgtga aacaagcttt ttggaaactg atcagaagaa acgtgctttt gaagtaaaat      960

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<210> 324

<211> 705

<212> DNA

<213> Unknown (H38g173 nucleotide)

<220>

<223> Synthetic construct

<400> 324

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atgctcttta tatcccagtg gggagagaga tgaagggtga gaagaaatgt ccaactcatg      60
acagcattca tctcatgga ccttccccat gtcccagctc tggacgcccc actctttgga      120
gtcttctctg tggtttatgt gcttactgtg ctggggaacc tctctatcct gctgggtgatc      180
agggtgtact ctacctcca ccccccaag tactacttcc tcaccaatct gtccttcatt      240
gacttgtggg tcttactgt catggtgccc aaaatgccga ggaccttgtt gtccctgtgt      300
ggcaaggctg tgccttcca cagttgtatg acccaactct atttcttcta cttcctgggg      360
agcaccgagt gtttgcctca caggttcacg tccatgatc gctatagagg aaatactcag      420
cacttcccag gtagtgaaaa cactccccac gaagtgaacc aaatgctagt ggccggggg      480
gcacacgggc tcccactcat catcctggca gatctgagtg ggtaactaag agttgatagt      540

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tcttagtggg	caattcaaaa	ttagtaatat	aatttagtta	tccaagtga	atttattaca	600
tgtataggtc	tcagcattaa	acattattcc	aaacaacttg	cacagttata	attctttcac	660
agattatcta	agacattttt	aaattcacag	ctagattttt	attta		705

<210> 325

<211> 921

<212> DNA

<213> Unknown (H38g174 nucleotide)

<220>

<223> Synthetic construct

<400> 325

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gtcattcacc	tggacagggc	tttgacacct	cctatgtact	tcttcctctt	tgccctttca	180
tggtctgaaa	cctgctacac	cttggtcatt	gtacccaaaa	tgcttaccaa	cctgctatcc	240
gcaattccaa	ctatttcttt	ctctggatgt	gtgggtccagc	tctatttatt	tggtgggctg	300
gcttgtagca	actgttttct	cattgctgtg	atgggctacg	atcgctatgt	tgccatctgc	360
aaccccccta	actacacact	cattgtcagc	tgagccacct	gcagtcagct	ggttctagcc	420
tccagctttt	gtggcttctt	gacttctgtg	attgtcaata	tcctgggtgt	cagtgtgctc	480
ctctgtgcct	ccaatcggat	caaccacttt	ttctgtgaca	tttcccctgt	cataaaaactg	540
ggctgcacag	acaccaacct	gaaggagatg	gtcatctttt	tcctcagcat	tctgggtattg	600
ctggttcccc	ttgtgttgat	attcatctcc	tacatcttca	tagtttccac	catcctcaag	660
atctcctcag	tgggaaggaca	gtgcaaagcc	ttcgccacct	gtgcttccca	cctcacagt	720
gtcgtcgtcc	actatggctg	tgcttctctt	atctacttga	ggcccacatc	cctgtactct	780
tcagataagg	accggctcgt	ggcagtgact	tatactgtga	ttactccact	actcaacccc	840
cttgtctata	cactgagaaa	taaagaagta	aagatggctc	tgagaaaggt	tctgggtaga	900
tgcttaaatt	ccaaaactgt	a				921

<210> 326

<211> 470

<212> DNA

<213> Unknown (H38g175 nucleotide)

<220>

<223> Synthetic construct

<400> 326

atttgccaca	atagaaaagt	catccctgca	tctatgtgaa	atatgtttta	tttctcttga	60
aagttgccta	agacaatttt	ctgcatgtac	tggtcatact	agctaaaact	gctccccact	120
cttattctct	taggaaattc	ctagttatct	ttcaagcccc	agttagatta	ttgtcctttg	180
atgcttacct	tgattcctga	aacaattagt	tattttgttt	gtatttttat	tattgaacta	240
atcatattta	actttaattt	tcatgtctct	taccatgaaa	atcaaccagc	tctttcaagg	300
caagcactgt	gatcagttgt	cttcaattcc	ccagcaaagc	aacttgcatg	catggagtgt	360
tcagtgtctg	ttgtgcacaa	atgtaaccat	attacaatgg	ttaaatacatt	tagcatcctg	420
aaagcatcac	agagtcaaag	tagctaactt	gtgtgaaccc	ttaattcaat		470

<210> 327

<211> 959

<212> DNA

<213> Unknown (H38g176 nucleotide)

<220>

<223> Synthetic construct

<400> 327

gggaccaagt	caatcaagct	aacttctctg	tcagagttcc	tgcttcttga	gttctccagc	60
cttgaagaaa	tccagcagat	cctttttctg	tctgcttggt	gctatatctg	attgttctga	120
gtggaaatat	caccactgtc	actgtcatcc	gcctggatca	aagcctccac	atacctgtat	180
acttattcct	agggatcctc	tccatttctg	ggacatgcta	tacctttgtc	attctgcccc	240

agatgctcat	agatctgttg	tctttgctca	gaacaatctc	atttattaac	tgccactcca	300
gtgttcttct	ttctgggttt	tgtgtcact	aatttcatgt	tcctgggcat	gacagtttat	360
gattcctatg	ttgccatctg	ccatccactt	cactaccctg	tccttacgag	ctggcagata	420
tgtaacaac	tggcagcaac	gtgtgctgtg	attgtttttt	tttgtttgtt	tgttttcact	480
gataggctcc	ttcttagatt	ttcagctgct	tttctgtggc	caaacaaga	tcaaccacta	540
cttctgtgac	atctcactgc	ttattcagct	tgcctgtact	gatacctaca	tcaggagct	600
agtcactctc	attggtggaa	ttctagcact	tacggttcct	ctgattttat	ttgcatctcc	660
tatggcttca	ttgttcacac	catcctgagg	atcccatatg	tgaagcaag	caaaaagcca	720
tctctacttg	tgctcccat	cttattatgg	tgtttgtcca	ttatggctgt	gcctccttg	780
tcaacctgtg	accatcagcc	aaataatcat	ccagcaata	accatctagc	aagaacaggc	840
tggtgacagt	gaccttacac	agttgtgact	ccgttggtga	atccatggta	tatagcttca	900
agaataagaa	cgttcagatg	gccatttgga	aagtgatttg	ccaaggagga	tttctctct	959

<210> 328

<211> 952

<212> DNA

<213> Unknown (H38g177 nucleotide)

<220>

<223> Synthetic construct

<400> 328

atgagaagaa	actgtacatt	ggtgactgag	ttcattctcc	tgggactggc	caatcaccgg	60
gaattacaga	tttctctctt	cacgctgttt	ctcaccattt	acatggtcac	ggtggcagga	120
aatcttgga	tgattgccct	catccaggcc	aacgccccgg	ctccacacgc	ccatgtactt	180
tttctgagc	aacttatcct	ttgtggatct	gtgcttctct	tccaatgtga	ctccaaggat	240
gctggagatt	ttcctttcag	agaagaaaag	catttctctat	cctgcccgtc	ttgtgcagtg	300
ttaccttttt	atcaccttgg	tccacgttga	gctctacatc	ctggctgtga	tggcctttga	360
ccggtacatg	gccatctgca	accctctgct	ttatggcagc	agaatgtcca	agagcgtgtg	420
ctctttctct	atcacagtgc	tttatgtgta	tggagcactc	actggcctga	tggagactat	480
gtggacctac	aacctagcct	tctgtggccc	cagtgaattt	aatcacttct	actgtgtgga	540
cccaccactg	attaagctgg	cttgttctga	cacctacaac	aaggagggtg	caatgtttgt	600
tgtggctggg	ttcaacttca	cttatctctt	ccttatcatc	ctcatttctt	atctctacat	660
atttctctgcc	accctaagga	tctgctctac	agaaggcagg	cacaaagctt	tttctacctg	720
tggtctccat	ctgacagccg	ttactatttt	ctattcagct	cttttcttca	tgtatctcag	780
acgtccatca	gaagagtcca	tggagcaggg	gaaaatggta	gctgtatttt	ataccactgt	840
aatccccatg	ttgaatccca	tgatctacag	tctgaggaac	aaagatgtga	aagaggcatt	900
atgcaaagaa	ctgttcaaaa	gaaaattggt	ttctaataaa	acattactac	tg	952

<210> 329

<211> 949

<212> DNA

<213> Unknown (H38g178 nucleotide)

<220>

<223> Synthetic construct

<400> 329

acagatgtct	gagaattcct	cctcctggga	ctctcagagg	atccagaact	gcagccggtc	60
ctcgctttgc	tgtccctgtc	cctgtccatg	tatctggtea	cgggtgctgag	gaacctgtct	120
agcatcctgg	ctgtcagctc	tgaactcccc	ctccacacc	ccatgtactt	cttctctctc	180
aacctgtgct	ggcctgacat	cggtttccac	tcggccatgg	ttccaagat	gattgtggac	240
acgcagtcgc	atagcagagt	catctctcat	gcgggctgcc	tgacacagat	gtctttctctg	300
ctccttggtg	catgtataga	aggcatgctc	ctgactgtga	tggcctatga	ctgctttgta	360
gccatctgtc	gccctctgca	ctaccaatc	atcgtgaatc	ctcacctctg	tgtcttcttc	420
gtttttggtg	cctttttcct	tagcctgttg	gattcccagc	tgcacagttg	gattgtgtta	480
caattaacca	tcatcaagaa	tgtggaaaatc	tctaatttgg	tctgtgacct	ctctcaactt	540
ctcaaaacttg	cctgttctga	cagcgtcatc	aataacatat	tcatatattt	cgatagtaact	600
atgtttgggtt	ttcttcccat	ttcagggaatc	tttttctctt	actataaaat	tgtccccctc	660
attctaagga	tttcatcgtc	agatgggaag	tataaagcct	tctccacctg	tggctgtcat	720
ctagcagttg	tttgctgggtt	ttatgggaaca	ggcattggct	tgtacctgac	ttcagctggg	780

tcaccacctc	ccaggaatgg	tgtgggtggct	tcagtgatgt	acgctgtggt	caccccatgc	840
tgaacctttt	catctgcagc	ctgagaaaca	gggacataca	aagtgccttg	cggaggctgc	900
gcagcagagc	agtcgaatat	catgatctgt	tccatccttt	ttcttgtgt		949

<210> 330

<211> 942

<212> DNA

<213> Unknown (H38g179 nucleotide)

<220>

<223> Synthetic construct

<400> 330

atgcgaggtt	tcaacaaaac	cactgtgggt	acacagttca	tcctgggtggg	tttctccagc	60
ctggggggagc	tccagctgct	gctttttgtc	atctttcttc	tcctatactt	gacaatcctg	120
gtggccaatg	tgaccatcat	ggccgttatt	cgcttcagct	ggactctcca	cactcccatg	180
tatggctttc	tattcatcct	ttcattttct	gagtcctgct	acacttttgt	catcatccct	240
cagctgctgg	tccacctgct	ctcagacacc	aagaccatct	ccttcatggc	ctgtgccacc	300
cagctgttct	ttttccttgg	ctttgcttgc	accaactgcc	tcctcattgc	tgtgatggga	360
tatgatcgct	atgtagcaat	ttgtcaccct	ctgagggtaca	cactcatcat	aaacaaaagg	420
ctgggggttg	agttgatatt	tctctcagga	gccacaggtt	tctttattgc	tttgggtggc	480
accaacctca	tttgtgacat	gcgtttttgt	ggccccaaca	gggttaacca	ctatttctgt	540
gacatggcac	ctgtttatcaa	gttagcctgc	actgacacc	atgtgaaaga	gctggcttta	600
tttagcctca	gcatacctgg	aattatgggt	ccttttctgt	taattctcat	atcctatggc	660
ttcatagtta	acaccatcct	gaagatcccc	tcagctgagg	gcaagaaggc	ctttgtcacc	720
tgtgcctcac	atctcactgt	ggcttttgtc	cactatggct	gtgcctctat	catctatctg	780
cggcccaagt	ccaagtctgc	ctcagacaag	gatcagttgg	tggcagtgac	ctacacagtg	840
gttactccct	tacttaatcc	tcttgtctac	agtctgagga	acaaagaggt	aaaaactgca	900
ttgaaaagag	ttcttgggaat	gcctgtggca	accaagatga	gc		942

<210> 331

<211> 942

<212> DNA

<213> Unknown (H38g180 nucleotide)

<220>

<223> Synthetic construct

<400> 331

atgatgggac	aaaatcaaac	cagcatctca	gacttcctgc	tcctgggcct	gccccatccaa	60
ccagagcagc	aaaacctgtg	ctatgccctg	ttcttggcca	tgtatcttac	caccctcctg	120
gggaacctcc	tcatacttgt	cctcattcga	ctggactccc	atctccacac	gcctatgtat	180
ttgtttctca	gcaacttgtc	cttctctgac	ctctgcttct	cttccgtgac	cattcccaag	240
ttgttacaga	acatgcagaa	ccaggaccca	tccatccctt	atgcggactg	cctgacccaa	300
atgtacttct	tcctgttatt	tggagacctg	gagagcttcc	tccttgtggc	catggcctat	360
gaccgctatg	tggccatctg	cttccccctg	cactacaccg	ccatcatgag	ccccatgctc	420
tgtctcgccc	tgggtggcgt	gtcctgggtg	ctgaccacct	tccatgccat	gttacacact	480
ttactcatgg	ccaggtttgt	tttttgtgca	gacaatgtga	tccccactt	tttctgtgat	540
atgtctgctc	tgtctgaagct	ggccttctct	gacactcgag	ttaatgaatg	ggtgatattt	600
atcatgggag	ggctcattct	tgtcatccca	ttcctactca	tccttgggtc	ctatgcaaga	660
attgtctcct	ccatcctcaa	ggctccctct	tctaagggtg	tctgcaaggc	cttctctact	720
tgtggctccc	acctgtctgt	ggtgtcactg	ttctatggaa	ccgttattgg	tctctactta	780
tgtctcatcag	ctaatagttc	tactctaaag	gacactgtca	tggctatgat	gtacactgtg	840
gtgaccccca	tgtctgaacc	cttcatctac	agcctgagga	acagagacat	gaaggaggcc	900
ctgagcagag	tcattcatca	gaagaaaact	ttcttctctc	tc		942

<210> 332

<211> 822

<212> DNA

<213> Unknown (H38g181 nucleotide)

<220>

<223> Synthetic construct

<400> 332

accataataa	atgtcaatat	tagtcctgag	tttgtccttg	tgggattttc	cagtgatgca	60
gagatccaga	tcatgctctt	tgtgctaata	ctgggtgatc	atctcctgac	tttgacgggg	120
aagctgggtga	tgatcctgga	gatcagggct	gattctcacc	ttcaaagacc	catgtacttc	180
ttcctttgac	atctgtcctt	tctggatctc	agctactcct	agttactgtg	cccaggatgc	240
tacaaaattt	cctctcagaa	gaaaagcatc	tcaatgtggg	gctgcctcac	caagtttctt	300
tttactctc	tctgggggaa	cgggaagcctg	tctgttctct	gccatggcct	atgatcacta	360
tgtaccatc	cgccaccctg	tggctctatac	catggtcata	aacagatctc	tctgtatggt	420
gattttgaga	attgcttggg	cagcgggatt	tctgatttcc	ttgatggaca	gtcttttcac	480
ccacaagtta	catttctgtg	ggcctgacat	catccttatt	tcagggtgaa	gctgcctcca	540
ttcttccctc	tgtcctacat	tgatcccat	gtcaatgaga	ttcttctagc	tgtgtcacag	600
gcattctggg	ggctactgac	actttcccta	atcttcttct	cttactctag	aatcacatct	660
gtcatactga	gcactgtctc	ctctgagggc	caaggcaaag	ccttctccgc	atgccttct	720
catctcgctg	tggttctctc	attctatggg	acagcttttt	tcagataccc	aggctctact	780
tcaggttcgg	tgttggggca	agtggctctc	gttcagtata	gt		822

<210> 333

<211> 935

<212> DNA

<213> Unknown (H38g182 nucleotide)

<220>

<223> Synthetic construct

<400> 333

atgagaagga	acttcacgtt	ggtgactgag	ttcattctcc	tgggactgac	gaatcaccag	60
gaattacaga	ttctcctctt	catgctgttt	ctggccattt	acatggtcac	agtggcaggg	120
aatcttagca	tgattgccct	catccaggcc	aatgccgggc	tccacacgcc	catgtacttt	180
ttcctgagcc	acttatcctt	cctggatctg	tgttctctct	ccaatgtgac	cccaaagatg	240
ctggagattt	tcctttcaga	gaagaaaagc	atttctctat	ctgcctgtct	tgttcagtgt	300
tacctttata	tcactttggt	acacgttgag	atctacatcc	tggtctgtgat	ggcctttgac	360
tagtacatgg	ccatctgaaa	ccctctgctt	tatggcagca	aaatgtccaa	aagtgtgtgt	420
tccttccctc	tcacggtgcc	ttatgtgtat	ggagcgctca	ctggcctgat	ggagaccatg	480
tggacctaca	acctagcctt	ctgtggcccc	aacgaaaatta	atcacttcta	ctgtgcagac	540
ccaccactga	ttaagctggc	ttgttctgac	acctacaaca	aggagtgtgc	aatgtttgtt	600
gtggctgggt	ggaatcttct	gttttctctc	ttcatcata	ttatttcccta	cttttacatt	660
tttctgtcta	tcttaaggat	tcgctctaca	gagggcaggc	aaaaagcttt	ttctacctgt	720
ggctcccatc	tgacagctgt	tactattttc	tatgcaactc	tgttcttcat	gtgtctcaga	780
cctccatcag	aagagtccat	ggagcaagga	caaattggtag	ctgtacttta	taccactgtg	840
atccccatgt	taatcccatg	atctacagtc	tgaggaacaa	ggatgtgaaa	aaggctttat	900
ccaaagaact	gttcaaaaaga	aaattgtttc	ctaaa			935

<210> 334

<211> 945

<212> DNA

<213> Unknown (H38g183 nucleotide)

<220>

<223> Synthetic construct

<400> 334

atggagccag	aagctgggac	caataggacc	gctgttgctg	agttcattct	actgggccta	60
gtgcaaacag	aagagatgca	gccagttgtc	tttgtgctcc	tcctctttgc	ctatctggtc	120
acaattgggg	gcaacctcag	catcctggca	gccgtcttgg	tggagcccaa	actccacgcc	180
ccccatgact	tcttcttggg	gaacctatca	gtgcctggat	tcggatgtat	cactgtcact	240
gttctctgcaa	tgttgggtcg	tctcttgtcc	cacaagtgca	caatttcccta	tgacgcctgc	300
ctctcccagc	tcttcttctt	ccaccttctg	gctgggatgg	actgcttctt	gctgaccgcc	360
atggcctatg	accgactcct	ggccatctgc	cagccccctc	cctacagcac	ccgcatgagt	420

cagacagtcc	agaggatggt	ggtggctgcg	tcctgggctt	gtgccttcac	caacgcactg	480
accacactg	tggccatgtc	cacgctcaac	ttctgtggcc	ccaatgaggt	caatcacttc	540
tactgtgacc	tcacacagct	cttcacagctc	tcctgtctca	gcacccaact	caatgagctg	600
ctgctctttg	tagcagcagc	cttcattggct	gtggcaccct	tggtcttcat	cagtgtgtcc	660
tatgcccattg	tggtagctgc	tgtgctgcaa	atccgctctg	ctgagggcag	aaagaaggcc	720
ttctccacat	gtggctccca	cctcactgtg	gtgggcatct	tctatgggac	aggtgtcttc	780
agctacatga	ggctgggttc	agtgggaatct	tcagacaagg	ataagggggt	tggggttttc	840
atgactgtga	tcaaccccat	gctgaaccca	cttatctaca	gcctcagaaa	tactgatgtt	900
cagggcgctc	tgtgtcagct	acttgtgggg	gagcgatcac	tgacc		945

<210> 335

<211> 950

<212> DNA

<213> Unknown (H38g184 nucleotide)

<220>

<223> Synthetic construct

<400> 335

atgctaagga	atggcagcat	agtgcaggaa	tttatcctcg	tgggctttca	gcagagctcc	60
acttccacac	gagcattgct	ctttgccctc	ttcttggccc	tctacagcct	caccatggcc	120
atgaatggcc	tcattcatctt	tatcacctcc	tggacagacc	ccaagctcaa	cagcccatg	180
tacttcttcc	tcggcctctg	tctctcctgg	atgtctgctt	catcaccact	accatccca	240
agatgttgat	ccacctcgtg	gtcagggacc	acattgtctc	ctttgtatgt	tgcatgacct	300
agacgtactt	tgtcttctgt	gttgggtgtg	ccgagtgcac	cctcttggct	ttcatggcct	360
atgaccgtta	tggtgctatc	tgctaccac	ttaactatgt	cccgatcata	agccagaagg	420
tctgtgtcag	gcttgtggga	actgcctggt	tccttgggct	gatcaatggc	atctttctcg	480
agtatatttc	attccgagag	cccttccgca	gagacaacca	catagaaagc	ttcttctgtg	540
aggcccccac	agtgattggc	ctctcttgtg	gggaccctca	gtttagtctg	tgggcaatct	600
ttgccgatgc	catcgtggta	attctcagcc	ccatgggtgt	cactgtcact	tcctatgtgc	660
acatcctggc	caccatcctc	agcaaagcct	ccctctcagg	tcgggggaag	actttctcta	720
cttgtgcctc	tcacctgact	gtggctcatct	ttctctacac	ttcagctatg	ttctcttaca	780
tgaaccccca	cagcacacat	gggcctgaca	aagacaaacc	ttctccctc	ctgtacacca	840
tcattacccc	catgtgcaac	cccatcattt	atagtttccg	caacaaggaa	attaaggagg	900
ccatgggtgag	ggcacttgga	agaaccaggc	tggcccagcc	acagtctgtc		950

<210> 336

<211> 972

<212> DNA

<213> Unknown (H38g185 nucleotide)

<220>

<223> Synthetic construct

<400> 336

atgttttact	tctttccccc	tttgcagatc	ttggcagaaa	acctcaccat	ggtcaccgaa	60
ttcctgttgc	tgggtttttc	cagccttggg	gaaattcagc	tggccctctt	tgtagttttt	120
ctttttctgt	atctagtcac	tcttagtggc	aatgtcacca	ttatcagtgt	catccacctg	180
gataaaagcc	tcacacacac	aatgtacttc	ttccttggca	ttctctcaac	atctgagacc	240
ttctacacct	ttgtcattct	acccaagatg	ctcatcaatc	tactttctgt	ggccaggaca	300
atctccttca	actgttgtgc	tcttcaaagt	ttcttcttcc	ttgggttttg	cattaccaac	360
tgccctgctat	tgggtgtgat	gggttatgat	cgtatgctg	ccatttgtca	ccctctgcat	420
taccccactc	ttatgagctg	gcaggtgtgt	ggaaaactgg	cagctgcctg	tgcaatttgt	480
ggcttcttgg	cctctcttac	agtagtaaat	ttagttttca	gcctcccttt	ttgtagcgcc	540
aacaaagtca	atcattactt	ctgtgacatc	tcagcagtc	ttcttctggc	ttgtaccaac	600
acagatgtta	acgaatttgt	gatattcatt	tgtggagttc	ttgtacttgt	ggttcccttt	660
ctgtttatct	gtgtttctta	tctctgcatt	ctgaggacta	tcctgaagat	tcctcagct	720
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tatggctgtg	cttccttcat	ctacctgagg	ccctacagca	actatgtgtc	caacaaagac	840
aggctgggtga	cggtgacata	cacgattgtc	actccattac	taaaccctat	ggttttatagc	900
ctcagaaaca	aggatgtcca	acttgcctatc	agaaaagtgt	tgggcaagaa	aggttctcta	960

aaactatata at

972

<210> 337

<211> 982

<212> DNA

<213> Unknown (H38g186 nucleotide)

<220>

<223> Synthetic construct

<400> 337

aagcttcaat	taaacaattt	tactgaagtc	accatgttta	tattaataag	cttcacagaa	60
gaatttgatg	tgcaagtcct	cctatttttt	ttatttttag	caatctatct	attcactcta	120
ataggcaatt	tagggctggg	tgtaccgatc	attggggatt	tctggcttca	cagcccaatg	180
tactattttc	ttgggtgttt	atcattcttg	gatgtctgct	attctacagt	tgtcactcca	240
aaaatgttgg	tcaatttcct	ggcaaaaaat	aaatctattt	catttcttgg	atgtgcaaca	300
cagatgtttc	ttgcttgtac	ttttggaacc	acagaatgct	ttctcttggc	tgcaatggct	360
tatgatcgct	atgtagccat	ctacaaccct	ctcctgtatt	cagtgaagcat	gtcaccagaa	420
gtctatgtgc	cactcatcac	tgcttcctat	gttgctagca	ttttacatgc	tactatacat	480
acagtggcta	catttagcct	gtccttctgt	ggatccaatg	aaattaggca	tgtcttttgt	540
aataatgcct	cctctgcttg	ctatttcttg	ttctgacact	cacgtaatcc	agcttctatt	600
cttctacttt	gtgggctcta	ttgagatagt	cactatcctg	attgtcctga	tctcctatgg	660
ttttattctg	ttggccattc	tgaagatgca	gtctgctgaa	gggaggagaa	aagtccttct	720
tacatgtgga	gtcaccttaa	ctggagtgc	aatttatcat	gggacaatcc	tcttcagtga	780
tgtgagacca	agttccagct	acacttcgga	caatgacatg	atagtgtcaa	tattttatac	840
cattgtgatt	cccatgtgta	atcccatcat	ctacagtttg	cggaaacaaag	atgtaaagga	900
ggcaatcaaa	agattgcttg	tgagaaaattg	gttcataaat	aagttatagt	tttaaaattg	960
agtaaagttg	caaataatat	tg				982

<210> 338

<211> 962

<212> DNA

<213> Unknown (H38g187 nucleotide)

<220>

<223> Synthetic construct

<400> 338

atggatagag	taaataattc	tgcggtatct	aaatttgtat	tgatttggac	tttccaagcc	60
tccttgggag	atgcatcttt	ttcttttttg	gttcttctct	gtgttctaca	tggaattat	120
cctggaaaat	ctcttcattg	tggtcacagt	aattattgac	tctcatttaa	attccccagg	180
tactgcctac	tgcccaacat	ttatcttctt	gatctgggtc	ttctcctaca	gttctgactt	240
tttcaactaac	tgacagcatc	tttcttttcc	aagatgcac	atacagatat	tttctatttg	300
tgtcatgcgt	aaaaattgag	atggtgctgc	tcataaccat	ggcatagagc	aggtacactg	360
ccaatctgta	agcctcccca	ttacctgacc	acaatgaacc	ccaaaatgtg	tgtttccttt	420
gttggaggca	tcctggatag	tcaggataat	ccatgctgta	tctcagtttg	tttttgccat	480
aaacttgccct	ttttgtggcc	ctaataagag	aggtagtgtt	cactgtgatt	ttccttatgt	540
catgaaactt	gcttgtgtag	acacttacaa	actagagggt	gtagtcaactg	ctaacagtgg	600
gcttatatcc	atagctacct	gtttcttatt	aataatatcc	tatattttca	tttcggtaac	660
cgtctagaat	ccttcttcag	gagacttatc	taaagcattt	gtgtcatggt	agatcacatc	720
acagtaggga	ttttgttttt	tatgccatgt	atatttctgt	atgtgtagcc	tttgccataa	780
acaacacatg	attaataattt	gttcattgtt	ccttttgcta	tcaccctgtg	ctaggatcta	840
cacattaaga	aacaaagaca	tgaacgtctc	catggaaaga	ctgggaaaat	ggattgcagg	900
ttctagcagg	atgtcataat	aaatgggtgca	tatccagagt	gcaagatgat	tcagtctcac	960
ca						962

<210> 339

<211> 972

<212> DNA

<213> Unknown (H38g188 nucleotide)

<220>

<223> Synthetic construct

<400> 339

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gggtttccaa	cacgaccagc	cttcagctt	ctctttttct	ccattttcct	ggcaacctat	120
ctgctgacac	tgctggagaa	tcttcttate	atcttagcta	tccacagtga	tgggcagctg	180
cataagccca	tgtacttctt	cttgagccac	ctctccttcc	tggagatgtg	gtatgtcaca	240
gtcatcagcc	ccaagatgct	tgttgacttc	ctcagtcagt	acaagagtat	ttccttcaat	300
ggctgcatga	ctcaacttta	cttttttggt	acctttgtct	gcactgagta	catccttctt	360
gctatcatgg	cctttgaccg	ctatgtagcc	atttghtaat	cactacgcta	cccagtcate	420
atgaccaacc	agctctgtgg	cacactggct	ggaggatgct	ggttctgtgg	actcatgact	480
gccatgatta	agatggtttt	tatagcacia	cttcactact	gtggcatgcc	tcagatcaat	540
cactactttt	gtgatatctc	tccactcctt	aacgtctcct	gtgaggatgc	ctcacaggct	600
gagatgggtg	acttcttctt	ggccctcatg	gtcattgcta	ttcctctttg	tgttgtgggtg	660
gcacctacg	ctgctatcct	tgccaccatc	ctcaggatcc	cttctgtctc	gggcccgcac	720
aaggcattct	ccacctgtgc	ctcccacctg	accgtctgtt	ttctcttcta	ttccatgaca	780
cttttcacct	atgcccgctc	caaactcatg	tatgcctaca	attccaacaa	agtggtatct	840
gttctctaca	ctgtcattgt	tccactcctc	aaccccatca	tttactgtct	gaggaaccat	900
gaagtaaagg	cagccctcag	aaagaccata	cattgcagag	gaagtggggc	ccagggaat	960
ggggctttca	gt					972

<210> 340

<211> 969

<212> DNA

<213> Unknown (H38g189 nucleotide)

<220>

<223> Synthetic construct

<400> 340

atgatgggac	aaaatcaaac	cagcatctca	gacttcctgc	tcctgggcct	gcccattccaa	60
ccagagcagc	aaaacctgtg	ctatgccctg	ttcttgccca	tgtatcttac	cacctctctg	120
gggaacctcc	tcacatttgt	cctcattcga	ctggactccc	atctccacac	gcctgtgtat	180
ttgtttctca	gcaacttgct	cttctctgac	ctctgctttt	cctcagtcac	aatgcccaaa	240
ttgctgcaga	acatgcagaa	ccaagaccca	tccatcccct	atgcagactg	cctgacccaa	300
atgtacttct	tcttgtattt	ttcggatcta	gagagcttcc	tccttggtgg	catggcctat	360
gaccgctatg	tggccatctg	cttccccatg	cactacaccg	ccatctgctt	cctcctgcac	420
tacaccgcca	tcattgagccc	catgetctgt	ctctccgtgg	tggcgctgtc	ctgggtgctg	480
accaccttcc	atgccatggt	acacacttta	ctcatggcca	ggttgtgttt	ttgtgcagac	540
aatgtgatcc	cccacttttt	ctgtgatatg	tctgctctgc	tgaagctggc	ctgctctgac	600
actcgagtta	atgaatgggt	gatattttat	atggggaggc	tcattcttgt	catcccattc	660
ctactcatcc	ttgggtccta	tgcaagaatt	gtctcctcca	tcctcaagggt	cccttcttct	720
aagggtatct	gcaaggcctt	ctctacttgt	ggctcccacc	tctctgtggg	gtcactgttc	780
tatgggaccg	ttattgggtc	ctacttatgc	ccatcagcta	atagttctac	tctaaaggac	840
actgtcatgg	ctatgatgta	cactgtgggt	accctatgc	tgacccctt	catctacagc	900
ctgaggaaca	gagacatgaa	gggagccctg	gaaagggtca	tttgtaaaag	gaaaaatccc	960
ttccttcta						969

<210> 341

<211> 933

<212> DNA

<213> Unknown (H38g190 nucleotide)

<220>

<223> Synthetic construct

<400> 341

atgggtagaa	gaaataacac	aaatgtgcct	gacttcatec	ttacgggact	gtcagattct	60
gaagagggtc	agatggccct	ctttatacta	tttctcctga	tataccta	tactatgctg	120
ggcaatgtgg	ggatgatatt	gataatccgc	ctggacccct	agcttcacac	tcccatgtat	180

tttttcctta	ctcacttgtc	at ttattgac	ctcagttact	caactgtcat	cacaccta aa	240
accttagcga	acttactgac	ttccaactat	atttccttca	tgggctgctt	tgcccagatg	300
ttcttttttg	tcttcttggg	agctgctgaa	tgttttcttc	tctcatcaat	ggcctatgat	360
cgctacgtag	ctatctgcag	tcctctacgt	taccagttta	ttatgtccaa	aaggctgtgt	420
tgcgctcttg	tactggggcc	ctatgtgatt	agctttatca	actcctttgt	caatgtgggt	480
tggatgagca	gactgcattt	ctgcgactca	aatgtagtcc	gtcacttttt	ctgcgacacg	540
tctccaattt	tagctctgtc	ctgcatggac	acatacgaca	ttgaaatcat	gatacacatt	600
ttagctgggt	ccaccctgat	ggtgtccctt	atcacaatat	ctgcatccta	tgtgtccatt	660
ctctctacca	tcctgaaaa	taattccact	tcaggaaagc	agaaagcttt	gtctacttgt	720
gcctctcatc	tcttggggagt	caccatcttt	tatggaacta	tgatttttac	ttatttaaaa	780
ccaagaaagt	cttattcttt	gggaagggat	caagtggctt	ctgtttttta	tactattgtg	840
attcccatgc	tgaatccact	catttatagt	cttagaaaca	aagaagttaa	aaatgctctc	900
attagagtca	tgcagagaag	acaggactcc	agg			933

<210> 342

<211> 915

<212> DNA

<213> Unknown (H38g191 nucleotide)

<220>

<223> Synthetic construct

<400> 342

atggtgactg	aattcatttt	tctgggtctc	tctgattctc	aggaactcca	gaccttccta	60
tttatgttgt	tttttgtatt	ctatggagga	atcgtgtttg	gaaaccttct	tattgtcata	120
acagtgggat	ctgactccca	ccttcaactc	cccatgtact	tcctgctagc	caacctctca	180
ctcattgatc	tgtctctgtc	ttcagtcaca	gcccccaaga	tgattactga	ctttttcagc	240
cagcgcaaag	tcattctctt	caagggctgc	cttggttcaga	tatttctcct	tcacttcttt	300
ggtggggagt	agatgggtgat	cctcatagcc	atggggctttg	acagatatat	agcaatatgc	360
aagccccctac	actacactac	aattatgtgt	ggcaacgcat	gtgtcggcat	tatggctgtc	420
acatggggaaa	ttggctttct	ccattcggtg	agccagttgg	cgtttgccgt	gcacttactc	480
ttctgtggtc	ccaatgaggt	cgatagtttt	tattgtgacc	ttcctagggt	aatcaaactt	540
gcctgtacag	atacctacag	gctagatatt	atgggtcattg	ctaacagtg	gtgtgtcact	600
gtgtgttctt	ttgttcttct	aatcatctca	tacactatca	tcctaattgac	catccagcat	660
cgcccttttag	ataagtcgtc	caaagctctg	tccactttga	ctgtctacat	tacagttagt	720
cttttgttct	ttggaccatg	tgtcttttatt	tatgctgggc	cattccccat	caagtcat	780
gataaattcc	ttgctgtatt	ttattctgtg	atcacccctc	tcttgaacct	aattatatac	840
acactgagga	acaaagacat	gaagacggca	ataagacagc	tgagaaaatg	ggatgcacat	900
tctagtgtaa	agttt					915

<210> 343

<211> 936

<212> DNA

<213> Unknown (H38g192 nucleotide)

<220>

<223> Synthetic construct

<400> 343

atggagcggg	tcaatgagac	tgtgggtgaga	gaggtcatct	tcctcggctt	ctcatccctg	60
gccaggctgc	agcagctgct	ctttgttata	ttcctgctcc	tctacctgtt	cactctgggc	120
accaatgcaa	tcatcatttc	caccattgtc	ctggacaggg	cccttcatat	ccccatgtac	180
ttcttccttg	ccatcctctc	ttgctctgag	atttgcata	ccttcacat	tgtacccaag	240
atgctgggtg	acctgctgtc	ccagaagaag	accatttctt	tcctgggctg	tgccatccaa	300
atgttttcc	tcctcttcc	tggctgctct	cactcctttc	tgctggcagt	catgggttat	360
gatcgttaca	tagccatctg	taaccactg	cgctactcag	tgctaattgg	acatgggggtg	420
tgtatgggac	tagtggctgc	tgccctgtgc	tgtggcttca	ctgttgacac	gatcatcaca	480
tccttgggat	ttcacctgcc	tttttatccc	tccaatcaac	tacatcactt	cttctgtgac	540
attgctcctg	tcctcaagct	ggcatctcac	cataaccact	ttagtcagat	tgtcatcttc	600
atgctctgta	cattggctct	ggctatcccc	ttattgttga	tcttgggtgc	ctatgttcac	660
atcctctctg	ccatacttca	gtttccttcc	acactgggta	ggtgcaaagc	tttttctacc	720

tgtgtatctc	acctcattat	tgctactgtc	cactatggct	gtgcctcctt	tatctactta	780
aggcctcagt	ccaactactc	ctcaagccag	gatgctctaa	tatcagtatc	ctacactatt	840
ataactccat	tggtcaaccc	aatgatttat	agcttgagaa	ataaagagtt	caaatcagct	900
ctttgtaaaa	ttgtgagaag	aacaatttcc	ctgttg			936

<210> 344

<211> 732

<212> DNA

<213> Unknown (H38g193 nucleotide)

<220>

<223> Synthetic construct

<400> 344

atgatgattt	cctcagatga	agaaaatgat	acaaatatga	tggaatttat	tctggtagga	60
ctgtccagac	agcctgcac	tcagctactc	ttcttttagg	caatattggt	catctactct	120
gtcaccctgg	ttggtaatat	tctcatcatt	gttattatcc	agattgattc	ccatcttcaa	180
acccccatgt	acttctttct	catacaagta	tccttcttag	atatctgtct	cacacccacg	240
gttctgggtga	actgctagaa	ggactttcca	agtgtatcct	atagtggctg	cttattctaa	300
atgactatct	ttctttactt	aggggtgacg	gagtggtgtt	ttttttgtgt	ctgttttgag	360
tgttttctta	ttgctgttat	ggcctatgac	aggtttggtg	ccatctcaaa	acccttggtg	420
taccgattca	ttatcaatag	caatgtttgc	atctggatgg	tggcaggagt	ttgggcccac	480
cctggtcgca	ccaatccaat	tctgtggcca	caatgtagtc	aacattttac	atgtgagctc	540
caagtaattt	tcaaactcac	ttgctctcct	gtactagtca	aagagatcca	gtgattcatg	600
attccagggt	gtacattata	ggcattgtat	cagcattaag	tgtgctccta	cagttaagct	660
cgccagcaaa	cccatcccag	gagctgagag	gcatacaatt	agggcataag	gtgaggtatt	720
atcgggggtac	ac					732

<210> 345

<211> 919

<212> DNA

<213> Unknown (H38g194 nucleotide)

<220>

<223> Synthetic construct

<400> 345

acagctggca	gcaatttcac	tgaggtgact	gtcttcatcc	tctctggata	tgcaaatcac	60
cctgaattac	aagtcagttt	tttcttgatg	tttctcttca	tttatctatt	cactattttg	120
ggaaacctgg	gactgatcat	gttaatcaga	atggattctc	agcttcacac	ccctatgtac	180
tttttctctca	gcaattttagc	attcattgac	atattttact	cctcttccgt	aacacctaag	240
acattggcga	atttccaatc	caatcagaga	tccatctcct	ttgttggctg	ctttgttcaa	300
atgtactttt	ctgttggatt	ggtgtgtact	gagtgtttcc	tgctgggac	aatggcctat	360
gattgctatg	tagcaatctg	gaatccctca	ttcagtagtc	atttcttaga	aagcgtgcaa	420
ctggctggga	gtaatgtcat	acacgatagg	tttcacaaat	tctctgggat	ctgtctgtgt	480
gataagtggg	tttgttctgt	gattccagca	tcaatctttt	ttttctgtga	caccacagct	540
cttttagcac	tgctctgtgt	agatgcattc	agcacagaaa	tggtgagctt	tgcccttagct	600
ggattcactc	ttcttggctc	tatccttate	atcacagtca	cttatatcgc	catcacctca	660
gccatcctga	agaaccagtg	ggcagcagga	tggcagaagg	ccttctccac	ctgcgcattc	720
cacctcatgg	gttaactatc	ttctatgggt	ccctgatttt	cacctatttg	caactggata	780
aaacatcatc	cctgatccac	gcacagttgg	catttgtatt	ctatatgact	gtcattccca	840
tgctgaatcc	actcatctag	agtctgagga	acaaagatgt	aaaaaatgct	ctttgagagt	900
catacataga	aaacttttt					919

<210> 346

<211> 753

<212> DNA

<213> Unknown (H38g195 nucleotide)

<220>

<223> Synthetic construct

<400> 346
 atggccaatt cttcctctgt cactgagttc ttagtgctgg gcttctctag ccttggggaa 60
 ttgcagcttg tctcttttgc agtctttctc tgcctctatt tgattatctt gagtggaaac 120
 atcatcatca tctcagtcac tcatttggat cacagcctcc acacacccat gtacttcttt 180
 ctaggtatct tttctatctc tgaaatcttc tacacaactg ttattctgcc caagatgctt 240
 atcaacttat tctctgtatt caggacactc tcctttgtga gttgtgccac ccaaagtgtc 300
 ttcttcctcg gttttgctgt cactaactgt ctgcttctgg gagtgatggg ttatgatcgt 360
 tatgtgcga tctgtcagcc tttgcaatac gctgttctca tgagctggag agtatgtgga 420
 caactgatag caacttgtat tattagtggc ttcctaatat ctctgggtgg aacaactttt 480
 gtcttttagcc tccctttctg tggctccaac aagggtcaacc actacttttg tgatatttca 540
 ccagttatcc gtctcgccctg tgctgacagc tacatcagtg aactgggtcat cttcatcttc 600
 ggggtcttgg tgcttggtgt gcccttgata tttatctgca tttcctatgg cttcattgtc 660
 cgcaccatcc tgaagatccc atcagctgaa ggcaaacaaa aagccttctc cacctgtgct 720
 tcccatctca ttgtagtcac tgtccattat ggt 753

<210> 347

<211> 941

<212> DNA

<213> Unknown (H38g196 nucleotide)

<220>

<223> Synthetic construct

<400> 347
 atgggtgggc taaaaagaga caatgcctct gagatgactg aactcatcct tgttggattt 60
 gccaacaccc ctgaaatcca gactgccttc ttcttggaaac tactgttttt ctactagtca 120
 cagcgtttga gaacatcctt atcgttgctg tagtgagatg agattctcga cttcatactc 180
 ctatgggatt ttttttctct cagtacctta tcctcccttg aaatgtgtta ctccatcagc 240
 tgggagctat aagtcttggc tcaatgcac aaggacttcc ccaccatctc ctataacagc 300
 tgttctgttc agatgatcac acacctcttt ctggggatga cagtgtctcc tcttgtctgg 360
 catggcttac aacaggtttg ttgaaatctc ttatctctc cattacacta ttattatgag 420
 caatcggttc tgtatacagt tggccttggg aatctggacc catgccttct tagtagcagt 480
 cacactaatc attgcaattc ctgctagtta ttatggacac aatgtcatca accattttac 540
 cttgagatcc aggcctgct gaagctcgtc tgctcagaca cccttgtcag cctgattcag 600
 ggtctgggta tcagtgtgtt cacactgccc ctgcccttca cattcactct catctcctaa 660
 ttttgcattt ttgttgtgct gtggaggcta ggcgtgaagc tttctccacc tgtggatctc 720
 atctgactgg agtcaccata ttttatgggg cagccatctg catgtacttg aaacctcagt 780
 caaaggggaa ccaggaagag gataaagttg tctcaaaact ttatggagca gttactccca 840
 tggttaaattc cccaatttac attcagagaa ataaggatat aaaagggtgca cttagaaagt 900
 tagccaaagg aaatgaaaaa tcctaacagt tctctttaa c 941

<210> 348

<211> 957

<212> DNA

<213> Unknown (H38g197 nucleotide)

<220>

<223> Synthetic construct

<400> 348
 atgaatcatg tggtaaaaca caatcacacg gcagtgacca aggtgactga atttattctc 60
 atggggatta cagacaaccc tgggctgcag gctccactgt ttggactctt cctcatcata 120
 tatctgggtca cagtgatagg caatctgggc atggttatct tgacctactt ggactccaag 180
 ctacacaccc ccatgtactt tttccttaga catttgtcaa tcactgatct tggttactcc 240
 actgtcattg ccccgaagat gttagtaaac ttcatagtgc aaaaaaacac aatttcttac 300
 aattgggtat ccactcagct agcattcttt gagattttca tcatctctga gctctttatt 360
 ctatcagcaa tggcctatga tcgctacgta gccatctgta aacctcttct gtacgtgatc 420
 atcatggcag agaaagtact ttgggtgctg gtaattgttc cctatctcta tagcagttt 480
 gtgtcactat ttctcacaat taagttattt aaactgtcct tctgtggctc aaacataatc 540
 agctattttt actgtgactg tatccctctg atgtccatac tctgttctga cacaaatgaa 600

ttagaattaa	taatthttgat	cttctcaggc	tgtaatttgc	tcttctccct	ctcaattggt	660
ctcatatcct	acatgtttat	tctagtggcc	attctcagaa	tgaactcaag	gaaagggagg	720
tacaaagcct	tctccacctg	tagctctcat	ctgacagtgg	tgatcatggt	ctatgggaca	780
ttgttattta	tttacttgca	acccaagtcc	agtcatactt	tggctattga	taaaatggcc	840
tcagtgtttt	ataccctgtt	gattcctatg	ctgaatccgt	tgatctacag	cctaaggaac	900
aaagaagtaa	aagatgctct	aaagagaact	ttaaccaatc	gattcaaaat	tcccat	957

<210> 349

<211> 471

<212> DNA

<213> Unknown (H38g198 nucleotide)

<220>

<223> Synthetic construct

<400> 349

tttttaaaaa	tgagattaa	ggaattaatg	taagatagaa	ccataatgga	ttattggagg	60
gaaggtaggc	acatttaggg	gatgttcttg	gcctttccgt	ttggctgacc	tatcccaaaa	120
cttttccctc	gggtctctat	cagagacatg	gcagtaacct	ggatggacca	taggcacgag	180
tctgtagcc	cattcctccc	gaagctgcag	cctttttcat	cctgccatgt	atctgagtta	240
tgacagtgc	ttgacacctt	cactaaatca	tatataactt	gaatccgggg	actcaagggg	300
ttcaaccatc	tttgttttct	tctccattac	tgctactgtg	ctagagccca	agtctcctga	360
aatgcgccct	ggagccttgc	tcaaagatgt	caaccaaca	tgctgatcag	gtagctattt	420
tgtctgaagc	tggtagttca	tgacaggctc	tgacatgtgc	tgagcttgct	c	471

<210> 350

<211> 951

<212> DNA

<213> Unknown (H38g199 nucleotide)

<220>

<223> Synthetic construct

<400> 350

atgggcca	agaatcta	agtgcttact	gaattaattc	tgatggaaat	cacaaggcgg	60
cttgagctgc	agctctccct	tttttgggtc	ttcctcatca	tctgcacatt	cacagtgggtg	120
agcaaagagt	gcataatcat	tttgaacaat	gtggacttgg	gtctacacaa	catttggtgta	180
ttttttaaat	cagggtacctg	aattttatta	atcttggttaa	ttctatgggtc	atttatccca	240
agatactggt	aaactttggt	gtggctcaaa	atgccattcc	ctggttatgca	tgtaccatgc	300
agatggcttt	cttcattatg	ttcattatct	gtgaactttt	cgtctcatca	gccatggcct	360
atgaccacta	tgtggacatc	catagccttc	tgccataaaa	tgttatgtct	caggaacttt	420
gtcatgtgct	ggtggtattc	cataccttta	tagtaccttt	caagctctga	tggtcactat	480
aaagatthtt	atattggcct	tctatggctc	caatgtcata	agttatttct	actgttaaga	540
tgthttctttg	ttagccatgg	tggactcaaa	tgcatgagga	atagaaatgt	tgatcacact	600
atthttcagta	cttaatttga	tattctttct	tctggtagtc	ctaattgtcct	ccatgctgat	660
tctattaact	gtttgttgaa	tgcatctctg	agagagcagt	aaaaaacttt	cttcacgtat	720
gtttcttgct	tgatagtggg	ggttggtgtc	tgtgggtttc	tatactttat	gtacttgcag	780
ctcaaattca	gttcctthtt	ttttgataat	aataaaatga	cctccatggt	ttcctcttta	840
gtgattacca	tgctttacca	tttgggtctg	agtgtaaaga	acaaagggag	taaaaaaat	900
gccttctata	gtthttttat	gaagcagtga	aaactthtga	atttaattggt	c	951

<210> 351

<211> 906

<212> DNA

<213> Unknown (H38g200 nucleotide)

<220>

<223> Synthetic construct

<400> 351

atgacgaact	tgaatgcac	acaggccaac	caccgtaact	tcattctgac	aggatatccca	60
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ggaacgccag	acaagaaccc	atggttggcc	ttccccctgg	gattttctcta	cacactcaca	120
ctcctgggaa	atggtaccat	cctagctgtc	atcaagggtg	agccaagtct	ccatgagccc	180
acgtattact	tcctttctat	cttggctctc	actgacgtta	gtctctccat	gtccaccctg	240
ccctccatgc	tcagcatcta	ctggtttaat	gccccctaga	ttgtttttga	tgcattgcac	300
atgcagatgt	tcttcatcca	tgtatttgga	atagtagaat	caggagtcct	agtgtccatg	360
gcctttgaca	gatttgtggc	catccgaaac	ccattacact	atgtttccat	cctcactcac	420
gatgttattc	gaaagactgg	aatatctgtc	ctcaccctgg	cagtctgtgt	ggtattccct	480
gtgcccttcc	ttataaagtg	cctacccttc	tgccattcca	atgtcttgtc	tcattcatac	540
tgtcttcacc	aaaacatgat	gcggctagct	tgtgccagca	cccgcataca	cagcctctac	600
ggcctcatcg	tcgtcatctt	cacactgggg	ctcgatgttc	tcctcactct	actgtcttat	660
gtactcacc	tgaagactgt	gctgggcatt	gtctccagag	gtgaaaggct	gaaaaccctc	720
agcacatgcc	tctctcacat	gtctaccgtg	ctcctcttct	atgttccttt	tatgggtgct	780
gcctccatga	tccacagatt	ttgggagcat	ttatcaccag	tagtgacat	ggtcatggct	840
gatatatacc	tactgtctcc	gcctgtgcta	aacccattg	tctacagtgt	gaagaccaag	900
caaatt						906

<210> 352

<211> 971

<212> DNA

<213> Unknown (H38g201 nucleotide)

<220>

<223> Synthetic construct

<400> 352

cacacagagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggg	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggtc	120
acagtgtga	ggaacctgct	cagcatcccc	gctgtcagct	ctgactccca	cctccacacc	180
cccacgtact	tcttctctct	catcctgtgc	tgggctgaca	tcggtttcac	ctcggccacg	240
gttcccaaga	tgattgtgga	catgcagtgg	tatagcagag	tcattctctca	tgcgggctgc	300
ctgacacaga	tgtctttctt	ggctcctttt	gcatgtatag	aaggcatgct	cctgactgta	360
atggcctatg	actgctttgt	aggcatctat	cgccctctgc	actaccaggt	catcgtgaat	420
cctcatctct	gtgtcttctt	tgttttggtg	tcctttttcc	ttagcctggt	ggattcccag	480
ctgcacagtt	ggattgtggt	acaattcacc	atcatcaaga	atgtggaaat	ctctaatttt	540
gtctgtgacc	cctctcaact	tctcaaaact	gcctcttatg	acagcgtcat	caatagcata	600
ttcatatatt	tcgatagtac	aatgtttggt	ttcttcccta	tttcagggat	cctttcatct	660
tactataaaa	ttgtcccttc	cattctaagg	atgtcatcgt	cagatgggaa	gtataaaact	720
ttctccacct	atggctctca	cctagcattt	gtttgtgat	tttatggaac	aggcattgac	780
atgtacctgg	cttcagctat	gtcaccaacc	cccagggaat	gtgtgggtgg	gtcagtgatg	840
taagctgtgg	tcacccccat	gctgaacctt	ttcatctaca	gcctgagaaa	cagggacata	900
caaagtgcc	tgcggagggt	gcgcagcaga	acagtcgaat	ctcatgatct	gttccatcct	960
ttttctgggt	t					971

<210> 353

<211> 431

<212> DNA

<213> Unknown (H38g202 nucleotide)

<220>

<223> Synthetic construct

<400> 353

ttctctgtta	caggtatcag	cgttgtggat	tgctgtttct	agtccacagt	tattcctgaa	60
atgctcttca	gttgccagg	acagcacttg	gtccataacc	caaaggggat	actattatta	120
ttattattat	tattattatt	attattatta	acattttttt	aaaaatttct	tttcatagaa	180
tgcatttttg	tattagagat	tcctctagtg	ggaaaataac	agtttattac	ttatagttct	240
atatttgtgg	acagatcggt	ttagaacaag	taaaacacat	ttgagaatga	agtctcagtt	300
tagaatttgt	aattttttga	tacttctaca	agggggacct	tgcccttaaa	cagaactttg	360
ctatactcag	aagcattcca	agcttttctt	cctaggattt	agaaattcat	aatgtgagat	420
atcagcattt	c					431

<210> 354
 <211> 938
 <212> DNA
 <213> Unknown (H38g203 nucleotide)

<220>
 <223> Synthetic construct

<400> 354
 actcatggat acacttttag cttgaggctt tttctgcatt gccttaccta tgttttaggtt 60
 agtcattgcc tattaatttg gttaatcctt tctccccatt taatttggtt tttaaataaa 120
 atttataatt tactatttaa cttatcactt aaattgaatc cagatattca aaacactggc 180
 cattctttct actatgatgt ttttgtaatg ttttattcca ccttgactgt gatagtcctg 240
 tttgtaatac caagaggatc agatcatttt ttgttctaga aagataaaaa agttcctgaa 300
 agagtggaaa aatacacttt tgaacccgaa acaaagtcct attttctaag attttggcat 360
 aaaatatacc gtgtaccctt tgctcttaaa acacttcggt gttaatatat tcaattttaa 420
 ggtacttatg agtggcaggc tatgggacta gttagtctt gtctagaatc tcctctataa 480
 ccctcaagaa ataatatgta ttttaaaaaa atcttaccat ttttccagt tacaatatac 540
 aatttcttac attgatccat ttattaactc attagtgtt ttgtgggttt cactgctttt 600
 atacaagctt ttgtctttat gatcatcata gtttcttata cccaagtcct ctttgcctta 660
 ctgaaaaaga attctgagaa gggcagaagc aaaagcttcc tcatgtgcag tgcccacctg 720
 ctctctgtct ctttgttcta tagcagtgtc ttcttcattg atgggtgccc caggtctggc 780
 ccagattaac agtgggaatga aatgtatttt ccgttctaca tgattataat tcctctgcag 840
 actcctttat ttacagtatg aaaaacaaag aagttttagg tacacttaga acaatgataa 900
 agaaatattt ttggagaaca ctttcataat tctttcca 938

<210> 355
 <211> 759
 <212> DNA
 <213> Unknown (H38g204 nucleotide)

<220>
 <223> Synthetic construct

<400> 355
 atgtgcttgt tcctgtgtca cctctccttc ttggacatga ccatttcttg tgctattgtc 60
 cccaagatgc tggctggctt tctcttgggt agtaggatta tctcctttgg gggctgtgta 120
 atccaactat tttctttcca tttcctgggc tgtactgagt gcttccttta cacactcatg 180
 gcttatgacc gtttccctgc catttgtaag cccttacact atgtaccat catgaccac 240
 agagtctgta actccctggc tttaggcacc tggctgggag ggactatcca ttcacttttc 300
 caaacaagtt ttgtattccg gctgcccttc tgtggcccca atcgggtcga ctacatcttc 360
 tgtgacattc ctgccatgct gcgtctagcc tgcgccgata cggccatcaa cgagctggtc 420
 acctttgcag acattggctt cctggccctc acctgcttca tgctcatcct cacttccat 480
 ggctatatg tagctgccat cctgcgaatt ccgtcagcag atgggcgcgc caatgccttc 540
 tccacttggt ctgccacct cactgttgct attgtttact atgtgcctg caccttcatt 600
 tacctgcggc cttgttcaca ggagcccctg gatggggtgg tagctgtctt ttacactgtc 660
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 ttacagaggg tagggggcca caaggaagtg cagcctcac 759

<210> 356
 <211> 933
 <212> DNA
 <213> Unknown (H38g205 nucleotide)

<220>
 <223> Synthetic construct

<400> 356
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 ccgcaactgg agcccatcct gtttgtcttt atttttattt tctactccct aactctcttt 120
 ggcaacacca tcatcatcgc tctctcctgg ctgacacctc ggctgcacac acctatgtac 180

ttctttctct	ctcatctgtc	cctcctggac	ctctgcttca	ccaccagcac	cgtgccccag	240
ctcctgatca	acctttgagg	ggtggaccgc	accatcaccc	gtggaggggtg	tgtggctcag	300
ctcttcacat	acctagccct	gggtccacac	gagtgtgtgc	tcctgggtgtg	gatggccttt	360
gaccgctatg	ctgctgtctg	tcgtccactc	cactacatgg	ccatcatgca	ccccatctc	420
tgccagaccc	tggctatcgc	ctcctgggggt	gcggttttcg	tgaactctct	gatccagaca	480
ggtctcgcaa	tggccatgcc	tctctgtggc	catcgactga	atcacttctt	ctgtgagatg	540
cctgtatttc	tgaagtggc	ttgtgcggac	acagaaggaa	cagaggccaa	gatgtttgtg	600
gcccagatca	tagtcgtggc	tgttcctgca	gcacttatcc	taggctccta	tgtgcacatt	660
gctcatgcag	tgctgagggg	gaagtcaacg	gctgggcgca	gaaaggcttt	tgggacttgt	720
gggtccacc	tcctagtagt	tttctttttt	tatggctcag	ccatctacac	atatctccaa	780
tccatccaca	attattctga	gcgtgagggg	aaatttggtg	ccctttttta	tactataatt	840
accccatcc	tcaatcctct	catttatata	ctaagaaaca	aggacgtgaa	gggggctctg	900
tggaaagtac	tatggagggg	cagggactca	ggg			933

<210> 357

<211> 934

<212> DNA

<213> Unknown (H38g206 nucleotide)

<220>

<223> Synthetic construct

<400> 357

atgaagataa	agaatcacac	tccagtaact	gaggtccccc	tgatgggaat	ccctcatata	60
aaggggatgg	aaaatgtgct	ttttgtctta	tttctggcct	tctacctctt	caccttgctg	120
gggaacctac	tcattcttct	ggcgcctc	actttctcca	acctccacac	ccccatgtat	180
ttcttcctgg	gaaacctgtc	tgtgtttgac	atatttttcc	cttcagttag	ttccccaaa	240
atgatgctct	gcttagtggg	acaaagctgc	accatctctt	tccagggttg	tgcctcccag	300
ctcttctttc	accatttcct	gggttgcaac	gagtgtttcc	tgtacactgt	gatggcctat	360
gaccgatattg	cagccatctg	ccaccctttg	ccatacacgg	tcacatgaa	acgcaggggtg	420
tgtgccctcc	tgacgctagg	cacctggacg	gggagctgtc	tgcatgcac	tgtcctcaca	480
ctectcatct	ttaagttatc	ctactgtggc	cccaatgaag	tggacaattt	ttttctgtga	540
tattccgggtg	gtgctgcccc	tggcctgcgc	agacacctct	ctagcacgga	cagttagttt	600
catcaacgta	ggtgttggtg	cgctcatgtg	ttttcttctt	atcctcacct	cttatgcttg	660
cattgttatc	tctatactga	aaatcagttc	ctcagaaggt	aggcgagag	ccttctcaac	720
ctgcagtgcc	catctgacgt	ccatcctgct	cttctatgga	ccaatagtcc	tcatttatct	780
cgcacctgcc	tccagccctt	ggctggactc	tgtggttcag	gtgttgaata	atattgttat	840
cccttccttg	aatcctttga	tatatacttt	gagaaacaaa	ggtgtaaagc	tggcactgag	900
aaaggtgctc	attcaaggag	tacataattg	tgga			934

<210> 358

<211> 892

<212> DNA

<213> Unknown (H38g207 nucleotide)

<220>

<223> Synthetic construct

<400> 358

gtgcgtgggt	ccaagcagct	gcggaatggg	accctagtgt	cccagtttct	tctgaaaggg	60
ctgaggggaca	gcaaggcttg	gaggccccctg	ctgttcacca	cctttctgct	aatctacata	120
gtggttggtg	ttgggagcca	catgttcaca	gtggactacc	gacgccacac	tcccatgtac	180
ttcttcttgg	gcggccactc	gctgatggat	gccgcctgta	tctccaacat	ggtgactcag	240
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atatgctttc	tccacttcct	ggcaccctag	gagtccttcc	tcctcacagc	cgtggcctat	360
gattctatgc	agctatctgc	cagccattgc	actactttgt	cctcgtgggc	cgactgaccc	420
acacgggcct	cacttccatc	tcttgccctg	tggccttggc	caacgcattc	acctacagca	480
tcctcacagc	tctaccaag	ttctgcaggc	cttgccctcat	caccacttc	ttctgcgacc	540
tccgtcactg	ctcagactct	cttgcttcag	cacacgtacc	aatgaacttg	ccctgttctt	600
cagttttctg	gtggctcttg	cacactgcgt	cctggctgtg	gtctcctatg	gacacgttgt	660
ggctgctgtt	caggattcat	tccacccagg	gctgaagaaa	agccttttct	acctgtgttg	720

cccatctcgc	tatgatcggt	cttttctacg	tcacttcagt	cccctgctac	atccttccca	780
actctgcata	ctctggcttg	ggcgactggg	tgctctctgt	gctatgtgtg	gtcctcactc	840
acatgctaaa	ccccatcttc	cccagcatgc	tgggatgaca	ggcatgagcc	ac	892

<210> 359

<211> 936

<212> DNA

<213> Unknown (H38g208 nucleotide)

<220>

<223> Synthetic construct

<400> 359

atgggtgtaa	aaaaccattc	cacagtgact	gagtttcttc	tttcaggatt	aactgaacaa	60
gcagagcttc	agctgcccct	cttctgcctc	ttcttaggaa	tttacacagt	tactgtgggtg	120
ggaaacctca	gcatgatctc	aattattagg	ctgaatcgtc	aacttcatac	ccccatgtac	180
tatttcctga	gtagtttgct	tttttttagat	ttctgctatt	cttctgtcat	taccctctaa	240
atgctatcag	ggtttttatg	cagagataga	tccatctcct	attctggatg	catgattcag	300
ctgttttttt	tctgtgtttg	tgttatttct	gaatgctaca	tgctggcagc	catggcctgc	360
gatcgctacg	tggccatctg	cagcccactg	ctctacaggg	tcacatgctc	ccctagggtc	420
tgttctctgc	tggtggctgc	tgtcttctca	gtaggtttca	ctgatgctgt	gatccatgga	480
ggttgtatac	tcaggttgct	tttctgtgga	tcaaaccatca	ttaaaccatta	tttctgtgac	540
attgtccctc	ttattaaact	ctcctgctcc	agcacttata	ttgatgagct	tttgattttt	600
gtcattgggtg	gatttaacat	ggtggccaca	agcctaacaa	tcattatttc	atatgctttt	660
atcctcacca	gcacccctgc	catccactct	aaaaaggcca	ggtgcaaagc	gtttagcacc	720
tgtagctccc	acctgacagc	tggtcttatg	ttttatgggt	ctctgatgtc	catgtatctc	780
aaacctgctt	ctagcagttc	actcaccag	gagaaagtat	cctcagtatt	ttataccact	840
gtgattctca	tggtgaatcc	cttgatatat	agtctgagga	acaatgaagt	aagaaatgct	900
ctgatgaaac	ttttaagaag	aaaaatatct	ttatct			936

<210> 360

<211> 753

<212> DNA

<213> Unknown (H38g209 nucleotide)

<220>

<223> Synthetic construct

<400> 360

atgtactatt	tcctcagcca	cctggccttt	gttgaccttt	gttactcctc	tgctattaca	60
ccgaagatga	tggtgaattt	tggtgtggaa	cgcaacacca	ttcctttcca	tgcttgtgca	120
acccaactgg	gttggtttct	caccttcatt	atcactgagt	gtttccttct	agcctccatg	180
gcctacgatt	gctatgtcgc	catctgtagt	cccctgcatt	attcaacact	gatgtcaaga	240
agagtctgca	ttcaactggg	ggcagttcca	tatatataca	gcttcctggg	tgccctcttc	300
cacaccgtta	tcactttccg	tctgacttac	tgtggcccaa	acttaattaa	ccatttctat	360
tgtgatgacc	tccccttctt	agctctgtcc	tgctcagaca	cacacatgaa	ggaaattctg	420
atatttgctt	ttgctggctt	tgatatgata	tcttctctct	ccattgtcct	cacctcctac	480
atctttatta	ttgccgctat	cctaaggata	cgtctacttc	aggggcaaca	caaagccatt	540
tccacctgtg	gctcccatat	gggtgactgtc	actatcttct	atggcacact	gatctttatg	600
tacctacagc	ccaaatcaaa	tcactccttg	gacacagaca	agatggcttc	tgtattttac	660
acagtgggtga	tccccatggt	aaacccccct	atctatagtc	taaggaacaa	agaagtgaag	720
gatgcctcaa	agaaagcctt	ggataaaggt	tgt			753

<210> 361

<211> 933

<212> DNA

<213> Unknown (H38g210 nucleotide)

<220>

<223> Synthetic construct

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<400> 361
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ctggacgccc cctctcttgg aatcttcctg gtgggttacg tgctcactgt gctggggaac      120
ctctcatccc tgctggtgat caggggtggat tctcacctcc acaccccat gtactacttc      180
ctcaccaacc tgccttcat tgacatgtgg ttctccactg tcacgggtgcc caaaatgctg      240
atgaccttgg tgcctccaag cggcaggact atctcttccc acagctgcgt ggctcagctc      300
tattttttcc acttcctggg gagcaccgag tgtttcctct acacagtcac gtcctatgat      360
cgctacctgg ccacagttta cccgctcagg tacaccaaca tgatgactgg gcgctcgtgt      420
gccctcctgg ccaccggcac ttggctcagt ggctctctgc actctgctgt ccagaccata      480
ttgactttcc atttgcccta ctgtggaccc aaccagatcc agcactactt ctgtgacgca      540
ccgcccattcc tgaaactggc ctgtgcagac acctcagcca acgagatggt catctttgtg      600
aatattgggc tagtggcctc gggctgcttt gtctgatag tgctgtccta tgtgtccatc      660
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gcctccact gtatcgtggt cctttgcttc ttggccctg gtcttttcat ttacctgagg      780
ccaggtccca gggacgcctt gcatgggggt gtggcgggtt tctacaccac gctgactcct      840
cttttcaacc ctgttggtga caccctgaga aacaaggagg taaagaaagc tctgttgaag      900
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<210> 362

<211> 827

<212> DNA

<213> Unknown (H38g211 nucleotide)

<220>

<223> Synthetic construct

```

<400> 362
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ctgggcatga cagatctgat ctgccaatct gcaccagctc tgccctccac acccccatgt      120
gcttctctct gagegtatcc tcttctctag acatctgcag ttcttccatg tgcacccag      180
gtgctgctgc cactttctca ccactaacca tccatctcct ttgcagggtg tataatccag      240
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gactgagttg tggccatttg ccacccttcc ccttagcata tcatcatgtc caaggggact      360
gtgtgcccag ctggtggtgg ttacctctgc tgtgggggtg ctcatctcag ctctagacag      420
gatgcattca tctcgcccta ccgtggccta acatcattga tcatctatg gttctgttac      480
attccccacc ccatgctccc aactggcctg ctcatagccc actgtggcca acatgatcct      540
gtttgtctct tctgacctga tcaactatcc tactatctca gtcactcttg tctcttacac      600
ttacatcctg gttaatcagt gggatgaggt ccctggatgc ccagtgcata gctttctcca      660
ctcgtgcctc ccacctcact gctcactgcc tgttttatgg gtttgtgttc cttgtataca      720
ttccacccaa cctgaaatg gcctcagcct ataacaaaat cctcttcacc gttgtgatcc      780
ccatgctgaa cctcctggtc taaggcctga gaaataaaga tgtcaaa                                     827

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<210> 363

<211> 937

<212> DNA

<213> Unknown (H38g212 nucleotide)

<220>

<223> Synthetic construct

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<400> 363
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aatgcagagc ttcaagtcac tctcttttgg atattccttg tagtatactt agctagcttt      120
atgggtaatt tcggtttgat tatgctaatt caaatcagtc ctgagcttca tacacccatg      180
tattttttcc tcagccatct ggcttttgtt gatttttctt ttacttcac tgttgcccca      240
aataccttgg taaattttct gtgtgaagtt aaaagtataa cattttatgc atgtgccatt      300
caggatgct gcttcacac attttagatt tgtgaattat atttgcctc aatcatggca      360
tatgatcggg atgttgccat ctgtaaccct ttactttatg tcattctcat tcctagaaaa      420
ctgtattaaa ctgattgcta gcacgtatgt gtatggattc actgtgggac ttgtacagac      480
agtggcgaca tctacttgt ctttttgtga ttccaacgtg atcaaccact tctaccatga      540
tgatgttcca ttagtggctc tggcctgttc tgacactcat gtcaaagagc tgatgttgtt      600

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aatcattgct	gggttcaata	ctctctgctc	tctagtaatt	gtgctgattt	cttatggttt	660
cattttcttt	gccatcctga	ggatacatte	tgctgaaggg	agacagaaag	cattttctac	720
cagtgtctcc	catctgacct	ccatcacaaat	attttatgga	acaatcattt	ttatgtaccc	780
gcagcccaag	tcaagccatt	ccctgaatat	ggataaagtt	gcttctgtgt	ttaatgtggt	840
agtgattcct	acattaaacc	cactgatcta	tagtttaaga	aatcaggagg	taaaaaatgc	900
actaaagaga	attatagaaa	agttatgttt	ggctgtc			937

<210> 364

<211> 697

<212> DNA

<213> Unknown (H38g213 nucleotide)

<220>

<223> Synthetic construct

<400> 364

tctggtttgg	tccccaaaag	tttccctggc	tgtctcacc	aattattctt	tctgcactat	60
agcttttgtgt	tggactcagc	tatactgctg	gccatggcat	ttgaccgcta	tatggccatt	120
tgctcaccct	tcgagataca	ctactattct	gactcccaaa	accattgtca	aaattgctgt	180
gggaatatgt	ttccgaagtt	tctgtgtttt	tgtcccatgt	gttttccttg	tgaatcgttt	240
acccttctgc	aggacacata	tcatttctca	cacatactgt	gagcacatag	gtgttgccca	300
gcttgctgtg	gctgatatct	ccatcaatat	ctgggtgtgga	ttttgtgttc	ccatcatgac	360
ggtgatgaca	gacgtgatcc	tcattgctgt	ctcctacacc	ctcctcctct	gtgctgtctt	420
ttgcctcccc	tccaagatg	cccgtcagaa	ggccctttgc	tcctgtggtt	cccattgtctg	480
tgttatcctc	atattctata	taccagcatt	cttctccatt	cttgcccat	gctttgggca	540
taatgtccct	catacctttc	atattatgtt	tgccaacctt	tatgtaatca	ttccacctgc	600
tctcaactct	attgtctaca	gaataaagac	caagcaaate	cagaacagaa	tccttttgct	660
ctttcccaag	gggtcccgat	gataggtgcc	tgagctc			697

<210> 365

<211> 930

<212> DNA

<213> Unknown (H38g214 nucleotide)

<220>

<223> Synthetic construct

<400> 365

atgtccaacg	ccagcctact	gacagcgttc	atcctcatgg	gccttcccca	tgccccagcg	60
ctggagcccc	ccctcttttg	agtcttctctg	gtgggtttacg	tgctcactgt	gctgggggaa	120
ctcctcatcc	tgctgggtgat	cagggtggat	tctcacctcc	acaccaccat	gtactacttc	180
ctcaccaacc	tgctgttcat	tgacatgtgg	ttctccactg	tcacggtgcc	caaattgctg	240
atgacttttg	tgttcccaag	tggcagggtc	atctccttcc	acagctgcat	ggctcagctc	300
tatttctttc	acttcttagg	gggcaccgag	tgtttctctc	acagggtcat	gtcctgtgat	360
cgctacctgg	ccatcagtta	cccgtcagg	tacaccagca	tgatgactgg	gcgctcggtg	420
actcttctgg	ccaccagcac	ttggctcagt	ggctctctgc	actctgctgt	ccaggccata	480
ttgactttcc	atttgcccta	ctgtggacce	aactggatcc	agcactatct	gtgtgatgca	540
ccgcccatec	tgaaactggc	ctgtgcagac	acctcagcca	tagagactgt	catttttgtg	600
actgtttgaa	tagtggcctc	gggtgctttt	gtcctgatag	tgctgtccta	tggtgtccatc	660
gtctgtttca	tcctgcggt	ccgcacctca	gaggggaagc	acagagcctt	tcagacctgt	720
gcctcccact	gtatcgtggt	cctttgcttc	tttggccctg	gtcttttcat	ttacctgagg	780
ccaggctcca	ggaaagctgt	ggatggagtt	gtggcggttt	tctacactgt	gctgagcccc	840
cttctcaacc	ctgttgtgta	caccctgagg	aacaaggagg	tgaagaaagc	tctgttgaag	900
ctgaaagaca	aagtagcaca	ttctcagagc				930

<210> 366

<211> 933

<212> DNA

<213> Unknown (H38g215 nucleotide)

<220>

<223> Synthetic construct

<400> 366

atgagaagaa	actgcacggt	ggtgactgag	ttcattctcc	tgggactgac	cagtcgccgg	60
gaattacaaa	ttctctctct	cacgctgttt	ctggccattt	acatggtcac	ggtggcaggg	120
aaccttgga	tgattgtcct	catccaggcc	aacgcctggc	tccacatgac	catgtacttt	180
ttcctgagcc	acttatcctt	cgtggatctg	tgcttctctt	ccaatgtgac	tccaaagatg	240
ctggagattt	tcctttcaga	gaagaaaagc	atttcctatc	ctgcctgtct	tgtgcagtgt	300
taccttttta	tcgccttggt	ccatgttgag	atctacatcc	tggctgtgat	ggcctttgac	360
cggtagactg	ccatctgcaa	cctctgctt	tatggcagca	gaatgtccaa	gagtgtgtgc	420
tccttctca	tcacggtgcc	ttatgtgtat	ggagcgctca	ctggcctgat	ggagaccatg	480
tggacctaca	acctagcctt	ctgtggcccc	aatgaaatta	atcacttcta	ctgtgcggac	540
ccaccactga	ttaagctggc	ttgttctgac	acctacaaca	aggagtgtgc	aatgtttatt	600
gtggctggct	ggaacctttc	ttttctcttc	ttcatcatat	gtatttccta	cctttacatt	660
ttccctgcta	ttttaaagat	tcgctctaca	gagggcaggc	aaaaagcttt	ttctacctgt	720
ggctcccatc	tgacagctgt	cactatatcc	tatgcaacct	ttttcttcat	gtatctcaga	780
ccccctcaa	aggaatctgt	tgaacagggt	aaaatggtag	ctgtatttta	taccacagta	840
atccctatgc	tgaaccttat	aatttatagc	cttagaaata	aaaatgtaaa	agaagcatta	900
atcaaagagc	tgtcaatgaa	gatatacttt	tct			933

<210> 367

<211> 945

<212> DNA

<213> Unknown (H38g216 nucleotide)

<220>

<223> Synthetic construct

<400> 367

atgctgctat	ccaacattac	tcagtttagc	cccatattct	atctcaccag	ctttctctgga	60
ttggaaggca	tcaaacactg	gattttcatc	ccctttttct	ttatgtacat	ggttgccatc	120
tcaggcaatt	gtttcattct	gatcattatt	aagaccaacc	ctcgtctgca	cacacccatg	180
tactatctac	tatecttgct	ggccctcact	gacctggggc	tgtgtgtgtc	cacgttgccc	240
accactatgg	ggatcttctg	gtttaactcc	cagagtatct	actttggagc	gtgtcaaatc	300
cagatgttct	gcateccact	tttttccctc	atggagtcc	cagtgtctct	catgatgtcc	360
tttgaccgct	ttgtggccat	ctgccaccct	ctgagggtat	cggtcattat	cactggccag	420
caagtgggtc	gagcaggcct	aattgtcatc	ttccggggac	ctgtggccac	tatccctatt	480
gtcctcctcc	tgaaggcttt	tcctactgt	ggatctgtgg	tcctctccca	ctcattttgc	540
ctgcaccagg	aagtgataca	gctggcctgc	acagatacca	ccttcaataa	tctgtatgga	600
ctgatgggtg	tagttttcac	tgtgatgctg	gacctgggtc	tcacgcact	gtcctatgga	660
ctcatcctgc	acacagtagc	aggcctggcc	tcccaagagg	agcagcgccg	tgcctttcag	720
acatgcaccg	ctcatctctg	tgtgtgtgta	gtattctttg	tgcccatgat	ggggctgtcc	780
ctggtgcacc	gttttgaggaa	gcattgcccc	cctgtctatc	atcttcttat	ggccaatgtc	840
tacctttttg	tgcctcccat	gcttaaccac	atcatataca	gcattaagac	caaggagatc	900
caccgtgcca	ttatcaaact	cctaggtctt	aaaaaggcca	gtaaa		945

<210> 368

<211> 969

<212> DNA

<213> Unknown (H38g217 nucleotide)

<220>

<223> Synthetic construct

<400> 368

atgaaccctg	aaaactggac	tcaggtaaca	agctttgtcc	ttctggggtt	ccccagtagc	60
cacctcatat	agttcctggg	gttcctgggg	ttaatgggtg	cctacattgt	aacagccaca	120
ggcaagctgc	taattattgt	gctcagctgg	atagaccaac	gcctgcacat	acagatgtac	180
ttcttctctg	ggaatttctc	cttctctggg	ctgttctggg	taactgttgt	ggttcccaag	240
atgctttgtg	tcatcctcac	gggggatcac	accatctcat	ttgtcagctg	catcatccag	300
tcctacctct	acttctttct	aggcaccact	gacttcttcc	tcttggccgt	catgtctctg	360

gategttacc	tggaatctg	ccgaccactc	cgctatgaga	ccctgatgaa	tgcccatgtc	420
tggtcccaac	tagtgctggc	ctcctggcta	gctggattcc	tctgggtcct	ttgccccact	480
gtcctcatgg	ccagcctgcc	tttctgtggc	cccaatggta	ttgaccactt	ctttcgtgac	540
agttggccct	tgctcaggct	ttcttgtggg	gacaccacc	tgctgaaact	gggtggctttc	600
atgctctcta	cgttggtgtt	actgggctca	ctggctctga	cctcagtttc	ctatgcctgc	660
attcttgcca	ctgttctcag	ggccccctaca	gctgctgagc	gaaggaaagc	gttttccact	720
tgcgcctcgc	atcttacagt	ggtgggtcatc	atctatggca	gttccatctt	tctctacatt	780
cgtaatgtcag	aggctcagtc	caaactgctc	aacaaagggt	cctccgtcct	gagctgcac	840
atcacacccc	tcttgaaccc	attcatcttc	actctccgca	atgacaagggt	gcagcaagca	900
ctgagagaag	ccttgggggtg	gcccaggctc	actgctgtga	tgaaactgag	ggtcacaagt	960
caaaggaaa						969

<210> 369

<211> 1016

<212> DNA

<213> Unknown (H38g218 nucleotide)

<220>

<223> Synthetic construct

<400> 369

atgatgggag	aagcaaggaa	caggacagta	gtccaggaat	ttatcctgga	gggatttccct	60
gctgtccagc	atctggggaa	tgctcttttc	ctgggtgcacc	tgctggcata	cctggcctcc	120
atcatggcaa	acatgctcat	aatcaccatc	acctgggctg	accatcacct	ccagacacct	180
atgtatttct	tcctcaacag	tttttcttcc	tgtgaatgct	gttttatcac	cacagttatt	240
cctaaacttc	tggtcatctt	tctttcaggc	aggcaaataa	tcccccttac	tacttgtctc	300
atgcagtcct	tttcattttt	atcttctggg	tcaacagttt	tcttccttat	ggctgtgatg	360
tccttggatt	gatacctggc	catttgcaag	cctctgcatt	actccaccat	catgagcctg	420
aggactagct	tccacctggg	cactgtctgc	tttgtctggg	gcttcactct	catcactggg	480
ctcatgggtga	aggtttccca	gttatctttc	tgtggacccc	atgtcatccc	tcacttcttc	540
cgtgacctcg	gccctctgat	ccaactctcc	tgttctgaca	ccagatctac	tgaaacggtg	600
gcctttgtcc	ttgtttcatt	cgttcttttt	acatccctca	ttataacat	cattgcata	660
ggcaacatag	tagtcacaat	tgtacgactc	ccatcagcca	aggagcggca	gaaagctttc	720
tccacctgct	cctctcacct	cattgtcctc	tctctgggtg	atggcagctg	tgtcttcata	780
tatgtgaagc	cgaagcaaat	ggacaggctg	gactccaaca	gaatggctgc	tcttgtgaac	840
acagtgggtga	ccccactgct	gaaccgcatc	atttacactc	tgccgaacaa	gcaggtccac	900
caggctctga	gggatgctca	gtccagaatg	aaattgtaaa	aacagaatca	caacctccca	960
gtgaaggaat	gcaccttctc	cttgatctaa	tccaatcttt	ctcctgtttc	tggaat	1016

<210> 370

<211> 927

<212> DNA

<213> Unknown (H38g219 nucleotide)

<220>

<223> Synthetic construct

<400> 370

atggccagta	caagtaatgt	gactgagttg	atcttctactg	gcctttttcca	ggatccagct	60
gtgcagagtg	tatgctttgt	ggtgtttctc	cccgtgtacc	ttgccacggg	ggtgggcaat	120
ggcctcatcg	ttctgacggg	cagtatcagc	aagagtctgg	attctcccat	gtacttcttc	180
cttagctgcc	tgtccttggg	ggagatcagt	tattctctcca	ctatcgcccc	taaattcatc	240
atagacttac	ttgccaagat	taaaaccatc	tctctggaag	gctgtctgac	tcagatattc	300
ttcttccact	tctttggggg	tgctgagatc	cttttgattg	tggtgatggc	ctatgattgc	360
tacgtggcca	tttgcaagcc	tcttcattat	atgaacatta	tcagtcgtca	actgtgtcac	420
cttctgggtg	ctggttctctg	gctggggggc	ttttgtcact	ccataattca	gatttctcgtt	480
atcatccaat	tgccccctctg	tggtcccaat	gtgattgacc	actatttctg	tgacctccag	540
ccgttattca	agcttgctcg	cactgacacc	ttcatggagg	gggttattgt	gttggccaac	600
agtggattat	tctctgtctt	ctccttcttc	atcttgggtg	cctcttatat	tgctattctg	660
gtcaacttga	ggaaccattc	tgcagagggg	aggcacaag	ccctctccac	ctgtgcttct	720
cacatcacag	tggtcatctt	gttttttgga	cctgctatct	tcctctacat	gcgaccttct	780

tccactttca	ctgaagataa	acttgtggct	gtattctaca	cggtcatcac	ccccatgctg	840
aaccccatca	tttacacact	caggaatgca	gaggtgaaaa	tcgccataag	aagattgtgg	900
agcaaaaagg	agaatccagg	gagggag				927

<210> 371

<211> 965

<212> DNA

<213> Unknown (H38g220 nucleotide)

<220>

<223> Synthetic construct

<400> 371

atggcaaaag	gcaatcattc	atcagtgact	gagttcatcc	tcctagggct	cacagataat	60
caggaacttc	aagtcattct	ctttgggtgta	ttcctactga	tttacttagt	tactgtgttg	120
ggtaatcctg	gtttgattgt	gctaataccat	atcagtcctc	agcttcacac	acctatgtat	180
tttttccctca	gccatctggc	ttttgtggat	ttttacggta	cctctgctat	cactccaaac	240
acccttgctca	actctttgca	tgaaattaaa	agcatgtcat	tttatgcatg	tgccactcaa	300
gtgtgctgct	tcattacact	ttcagtcctgg	gaattattgt	tgctctcatg	gcatatgatc	360
ggtatgttgc	catctgcaac	cctttactct	atgtagtctc	catgcctagg	agactctgca	420
ttcaaatggg	cactggctta	tatatattatg	gtttcaccat	gggactcata	caagcagtgg	480
ccacattcca	catgtcgttt	tgtagactcta	atgtgggtcaa	ccagttctac	tgtgatgatg	540
ttcctctgat	tgctctggct	tgttctgata	cacaagtcaa	ggaattgatg	ttgttcatca	600
ttgctgcgtt	caatgttttt	tgttctctta	tcattgttct	catctcctat	gtattcatcg	660
tctttgctat	ctaaggatcc	actctgccgt	aggaagacag	aaagcctttt	ctacctgtgc	720
ttctcacatg	ttttctattt	ccatatatta	tgggaccttc	agttttatgt	acctacagcc	780
taagtcaagc	cactcactag	ataaagacaa	atttgccctca	gtattctatg	cagtgggtgat	840
tcccatgcta	aaccattga	tctatagctt	gaggaatcaa	gaggtaaaaa	aatgctatga	900
aaaaaattat	tgaaaaaatg	tgttctagta	atcaacagta	aaatttggtg	gtactaaaag	960
aaata						965

<210> 372

<211> 951

<212> DNA

<213> Unknown (H38g221 nucleotide)

<220>

<223> Synthetic construct

<400> 372

atgtcccagg	tgactaacac	cacacaagaa	ggcatctact	tcatectcac	ggacatccct	60
ggatttgagg	cctcccacat	ctggatctcc	atccccgtct	gctgtctcta	caccatctcc	120
atcatgggca	ataccaccat	cctcactgtc	attcgcacag	agccatctgt	ccaccagcgc	180
atgtatctgt	ttctctccat	gctggccctg	acggacctgg	gtctcaccct	caccacccta	240
cccacagtca	tcagacttct	ctgggtcaac	gttcgtagaa	tcagctctga	ggcctgtttt	300
gctcagtttt	tcttccctca	tggattctcc	tttatggagt	cttctgtcct	cctggctatg	360
tccgttgact	gctatgtggc	catctgctgt	ccccctccat	atgcctccat	cctcaccaat	420
gaagtcattg	gtagaactgg	gttagccatc	atttgctgct	gtgttctggc	ggttcttccc	480
tcccttttct	tactcaagcg	actgcctttc	tgccactccc	accttctctc	tcgctcctat	540
tgccctccacc	aggatatgat	ccgcctgggc	tgtgctgaca	tcaggctcaa	cagctgggat	600
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acacttatte	tgaaaaatat	cttgggcaca	gccacctggg	ctgagcgact	ccgtgccctc	720
aataactgcc	tgtcccacat	tctagctgtc	ctggctcctc	acattcccat	ggttgggtgta	780
tctatgactc	atcgctttgc	caagcatgcc	tctccactgg	tccatgttat	catggccaat	840
atctacctgc	tggcaccccc	ggtgatgaac	cccatcattt	acagtgtaaa	gaacaagcag	900
atccaatggg	gaatgttaaa	tttccctttc	ctcaaaaata	tgcatccaag	a	951

<210> 373

<211> 945

<212> DNA

<213> Unknown (H38g222 nucleotide)

<220>

<223> Synthetic construct

<400> 373

atgaatccag	caaatcattc	ccaggtggca	ggatttggtc	tactgggggt	ctctcaggtt	60
tgggagcttc	ggtttgtttt	cttcactgtt	ttctctgctg	tgtattttat	gactgtagtg	120
ggaaaccttc	ttattgtggg	catagtacc	tccgacctac	acctgcacac	aacctgtat	180
tttctcttgg	gcaatctttc	tttctggac	ttttgctact	cttccatcac	agcacctagg	240
atgctgggtg	acttgccttc	aggcaacctc	accatttcc	ttgggtggatg	cctgactcaa	300
ctcttcttct	tccacttcat	tggaggcatc	aagatcttcc	tgctgactgt	catggcgtat	360
gaccgctaca	ttgccatttc	ccagcccctg	cactacacgc	tcattatgaa	tcagactgtc	420
tgtgcactcc	ttatggcagc	ctcctgggtg	gggggcttca	tccactccat	agtacagatt	480
gcattgacta	tccagctgcc	attctgtggg	cctgacaagc	tggacaactt	ttattgtgat	540
gtgcctcagc	tgatcaaatt	ggcctgcaca	gatacctttg	tcttagagct	tttaattggtg	600
tctaacaatg	gcctgggtgac	cctgatgtgt	tttctgggtc	ttctgggac	gtacacagca	660
ctgctagtca	tgtctccgaag	ccactcacgg	gagggccgca	gcaaggccct	gtctacctgt	720
gcctctcaca	ttgtctgtgt	gaccttaate	tttgtgcctt	gcatctacgt	ctatacaagg	780
ccttttcgga	cattcccat	ggacaaggcc	gtctctgtgc	tatacacaat	tgtcaccccc	840
atgctgaatc	ctgccatcta	taccctgaga	aacaaggaag	tgatcatggc	catgaagaag	900
ctgtggagga	ggaaaaagga	ccctattggt	cccctggagc	acaga		945

<210> 374

<211> 960

<212> DNA

<213> Unknown (H38g223 nucleotide)

<220>

<223> Synthetic construct

<400> 374

atgtcatttc	taaattggc	cagcctaact	ccagcttcat	tcatecctaaa	tggcatccct	60
ggtttggaag	atgtgcattt	gtggatctcc	ttccactgt	gtaccatgta	cagcattgct	120
attacaggga	acttcggcct	tatgtacctc	atctactgtg	atgaggcctt	acacagacct	180
atgtatgtct	tcttgcctt	tctttccttc	acagatgtgc	tcattgtgcac	cagcaccctt	240
cccaacactc	tcttcataat	gtggttta	ctcaaggaga	ttgatttta	agcctgcctc	300
gccagatgt	tctttgtgca	caccttcaca	gggatggagt	ctggggtgct	catgctcatg	360
gccttggaac	actgtgtggc	catctgcttc	cctctgcgtt	atgccaccat	cctcactaat	420
tcagtcattg	ctaaagctgg	gttccctact	tttcttaggg	gtgtgatgct	tgttatccct	480
tccactttcc	tcaccaagcg	ccttcatac	tgcaagggca	acgtcatacc	ccacacctac	540
tgtgaccaca	tgtctgtggc	caagatatct	tgtggtaatg	tcagggttaa	cgccatctat	600
ggtttgatag	ttgcctgtct	gattgggggc	tttgatatcc	tgtgcattac	aatctcctac	660
actatgatcc	ttcaagcagt	tgtgagtcta	tcatacagc	atgctcgaca	gaaggccttc	720
agcacctgca	ctgcccactt	ctgtgccata	gtcctcacct	atgttccagc	cttctttacc	780
ttctttacac	accatttttg	gggacacacc	attcctctac	acatacatat	tattatggct	840
aatctctacc	tactaatgcc	tcccacaatg	aaccctattg	tgtatggggt	gaaaaccagg	900
caggtagcag	aaagtgtcat	taggttcttt	cttaagggaa	aggacaattc	tcataacttt	960

<210> 375

<211> 915

<212> DNA

<213> Unknown (H38g224 nucleotide)

<220>

<223> Synthetic construct

<400> 375

atggttgcta	caaacaatgt	gactgaaata	attttcgtgg	gattttccca	gaattggagt	60
gagcagaggg	tcatttctgt	gatgtttctc	ctcatgtaca	cagctgttgt	gctgggcaat	120
ggcctcattg	tggtagcat	cctggccagc	aaagtgtca	cctcccccat	gtatttcttt	180
ctcagctact	tatcctttgt	ggagatctgc	tactgttctg	tcattggccc	caagcttata	240

tttgactcct	ttatcaagag	gaaagtcatt	tctctcaagg	gctgcctcac	acagatgttt	300
tecctccatt	tctttggtgg	cactgaggcc	tttctcctga	tggtgatggc	ctatgaccgc	360
tatgtggcca	tctgcaagcc	cttgactac	atggccatca	tgaaccagcg	aatgtgtggt	420
ctcctcgtga	ggatagcatg	gggcgggggc	ctgctgcatt	ctgttgggca	aaccttcctg	480
attttccagc	tcccgttctg	tggccccaac	atcatggacc	actacttctg	tgatgtccac	540
ccagtgtctg	agctggcctg	cgcagacacc	ttcttcatta	gcctgctgat	catcaccaat	600
ggcggctcca	tctccgtagt	cagtttcttc	gtgctgatgg	cttccctacc	gatcaccctg	660
cacttcctga	gaagccacaa	cttggagggg	cagcacaagg	ccctctccac	ctgtgcctct	720
catgtcacag	ttgtcgacct	gttcttcata	ccttgctcct	tggtctatat	taggccctgt	780
gtcacccctc	ctgcagacaa	gatagttgct	gtattttata	cagtggtcac	acctctctta	840
aacctgtgta	tttactcctt	caggaatgct	gaagtgaaaa	atgccatgag	gagattttatt	900
gggggaaaaag	taatt					915

<210> 376

<211> 939

<212> DNA

<213> Unknown (H38g225 nucleotide)

<220>

<223> Synthetic construct

<400> 376

atggctcctg	aaaatttcac	caggggtcact	gagtttatte	ttacaggtgt	ctctagctgt	60
ccagagctcc	agattcccct	cttcctggte	tttctggtgc	tctatgggct	gaccatggca	120
gggaacctgg	gcatcatcac	cctcaccagt	gttgactctc	gacttcaaac	ccccatgtac	180
tttttccctg	aacatctggc	tctcattaat	cttggttaact	ctactgtcat	tgccctaaa	240
atgctgatta	acttttttagt	aaagaagaaa	actacctcat	tctatgaatg	tgccacccaa	300
ctgggagggt	tcttgttctt	tattgtatcg	gaggtaatca	tgctggcttt	gatggcctgt	360
gaccgctatg	tggtattttg	taaccctctg	ctgtacatgg	tggtgggtgc	tcggcggtc	420
tgccctcctg	tggtctccct	cacatacctc	tatggctttt	ctacagctat	tgtggtttca	480
tcttatgtat	tctctgtgtc	ttattgctct	tctaataata	tcaatcattt	ttactgtgat	540
aatgttcctc	tgttagcatt	atcttgctct	gatacttact	taccagaaac	agttgtcttt	600
atatctgcag	caacaaatgt	ggttgggtcc	ttgattatag	ttctagtatc	ttatttcaat	660
attgttttgt	ctatttttaa	aatatgttca	tcagaaggaa	ggaaaaaagc	cttttctacc	720
tgtgcttcac	atatgatggc	agtcacaatt	ttttatggga	cattgctatt	catgtatgtg	780
cagccccgaa	gtaaccatc	actggatact	gatgataaga	tggttctctg	gttttacacg	840
ttggtaattc	ctatgctgaa	tcccttgatc	tacagcctga	ggaataagga	tgtgaagact	900
gctctacaga	gattcatgac	aaatctgtgc	tattcctttt			939

<210> 377

<211> 979

<212> DNA

<213> Unknown (H38g226 nucleotide)

<220>

<223> Synthetic construct

<400> 377

atgaaaattt	ctaataactc	tttgggggtt	ttacctacga	cattcatttt	ggttggcatc	60
ccagggtctg	agtcagagca	cctctggata	tccgtccctt	tctctctgat	atacatcatc	120
attttccttg	ggaatggcat	cattcttcac	gtcatcagaa	cagatattgc	cctacatcaa	180
cccatgtacc	tcttccttgc	catgttggca	ctggccgagg	ttcgtgtctc	tgcatccacc	240
ctgcctacag	tgtaggcat	attccttttt	ggaaatactg	aaattagtct	tgaagcttat	300
ctttttccag	atgttctcca	tccattcttt	atccatgatg	gagtcagctg	tgctgctggc	360
catgtctttg	gaccgcttta	tagccatcta	cagcccactg	agctatacag	ctatcctgac	420
actgcccgag	gtctttggca	caggagctat	tatcgtactg	aaaagcatta	tgctcatggc	480
tccgttgccc	attctcttat	ggcgtctgcc	cttctgtggc	cacaatgccc	tctcacattc	540
ctattgtctg	caccccaatc	ttatctatct	atcttgtggg	aacatttctg	ttaacaatat	600
ctatgggatt	ttcattgtta	cctctacttt	tgggctggat	tcgttggctga	ttgtgatctc	660
ctatgggctc	atactccaca	ccgtgttggg	tattgccact	ggagaagggc	ggaagaaggc	720
actcaacacg	tgtggctcac	acgtctgtgc	tgtgcttgct	tactatgtgc	ctatgattgg	780

cttgtctata	gtgcaccgcc	ttggacatcg	tgtgtccct	ctgctgcaag	ccatgatggc	840
caatgcctac	ctcttcttcc	cacctgttgt	caatcctatt	gtctacagca	ttaagaccaa	900
ggagatccat	ggtgccattg	tccgaatgct	attagagaaa	agacgcagag	tgtagccaaa	960
aaccatagta	ggaagaaat					979

<210> 378

<211> 933

<212> DNA

<213> Unknown (H38g227 nucleotide)

<220>

<223> Synthetic construct

<400> 378

atgtccaaga	ccagcctcgt	gacagcgttc	atcctcacgg	gccttcccca	tgccccaggg	60
ctggagcccc	cactcttttg	aatcttccctg	gtgggtttacg	tgctcactgt	gctggggaac	120
ctcctcatcc	tgctgggtgat	cagggtggat	tctcacctcc	acacccccat	gtactacttc	180
ctcaccaacc	tgctcctcat	tgacatgtgg	ttctccactg	tcacggtgcc	caaaatgctg	240
atgaccttgg	tgcccccaag	cggcagggct	atctccttcc	acagctgcgt	ggctcagctc	300
tattttttcc	acttctctggg	gagcaccgag	tgtttctctt	acacagtcac	gtcctatgat	360
cgctacttgg	ccatcagtta	cccgtcagg	tacaccagca	tgatgagtgg	gagcagatgt	420
gcccctctgg	ccaccagcac	ttggctcagt	ggctctctgc	actctgctgt	ccagaccata	480
ttgactttcc	atttgcccta	ctgtggaccc	aaccagatcc	agcactattt	gtgtgatgca	540
ccgcccaccc	tgaaactggc	ctgtgcagac	acctcagcca	acgagatggt	catctttgtg	600
gacattgggc	tagtgccctc	gggctgcttt	ctcctgatag	tgctgtctta	tgtgtccatc	660
gtctgttcca	tcctgcggat	ccacacctca	gaggggaggc	acagagcctt	tcagacctgt	720
gcctcccact	gcctcgtggg	cctttgcttt	tttgttccct	gtgttttcat	ttacctgaga	780
ccaggctcca	gggacgtcgt	ggatggagtt	gtggccattt	tctacactgt	gctgacaccc	840
cttctcaacc	ctgttggtga	cacctgaga	aacaaggagg	tgaagaaagc	tgtgttgaaa	900
ctgagagaca	aagtagcaca	ttctcagga	gaa			933

<210> 379

<211> 936

<212> DNA

<213> Unknown (H38g228 nucleotide)

<220>

<223> Synthetic construct

<400> 379

atgccttcta	tcaatgacac	ccacttctat	cccccttct	tcctcctgct	aggaatacca	60
ggactggaca	ctttacatat	ctggatttct	ttcccattct	gtattgtgta	cctgattgcc	120
attgtgggga	atatgaccat	tctctttgtg	atcaaaactg	aacatagtct	acaccagccc	180
atgttctact	tcctggccat	gttgtctatg	attgatctgg	gtctgtccac	atccactatc	240
cccaaatgc	taggaatctt	ctggttcaac	ctccaagaga	tcagctttgg	gggatgcctt	300
cttcagatgt	tctttattca	catgtttaca	ggcatggaga	ctgttctggt	ggtggtcatg	360
gcttatgacc	gctttgttgc	catctgcaac	cctctccagt	acaccatgat	cctcaccaat	420
aaaaccatca	gtatcctagc	ttctgtgggt	gttggaagaa	atttagttct	tgtaacccca	480
tttggttttc	tcattctgcg	tctgccattc	tgtgggcata	acatcgtaac	tcacacatac	540
tgtgagcaca	ggggtctggc	cgggttgccc	tgtgcaccca	taaagatcaa	cataatctat	600
gggtcatgg	tgatttctta	tattattgtg	gatgtgatct	taattgcctc	ttcctatgtg	660
cttatcctta	gagctgtttt	tcgccttccc	tctcaagatg	tccgactaaa	ggccttcaat	720
acctgtgggt	ctcatgtctg	tgttatgctg	tgcttttaca	caccagcatt	tttttctttt	780
atgacacatc	gttttgccca	aaacattccc	cactatatcc	atattctttt	ggctaacctg	840
tatgtggttg	teccacctgc	ccttaaccct	gtcatttatg	gagtcaggac	caagcagatc	900
cgagagcaaa	ttgtgaaaat	atttgtacag	aaagaa			936

<210> 380

<211> 909

<212> DNA

<213> Unknown (H38g229 nucleotide)

<220>

<223> Synthetic construct

<400> 380

atgactgaat	tcatttttct	ggtactttct	cccaaccagg	aggtgcagag	ggtttgcttt	60
gtgatatattc	tggtcttgta	cacagcaatt	gtgctgggga	atttcctcat	tgtgctcact	120
gtcatgacca	gcagaagcct	tggttcccc	atgtacttct	tcctcagcta	cctctccttc	180
atggagatct	gctactcctc	cgctacagcc	cccaaactca	tctcagatct	gctggctgaa	240
aggaaagtca	tatcttggtg	gggctgcatg	gcacagcttt	tcttcttgca	cttctttggt	300
ggcactgaga	ttttcctgct	cactgtgatg	gcctatgacc	actatgtggc	catctgcaag	360
cccctcagct	acaccaccat	catgaactgg	cagggtgtgta	ctgtccttgt	aggaatagca	420
tgggtgggag	gcttcatgca	ttcctttgca	caaatccttc	tcattctcca	cctgctcttc	480
tgtggcccca	atgtgatcaa	tcactatttc	tgtgacctag	ttccccttct	caaacttgcc	540
tgctctgaca	ccttctcat	tggtctgctg	attgttgcca	atggaggcac	cctgtctgtg	600
atcagttttg	gggtcctctt	agcaccctat	atggctcatct	tgctccatct	gagaacctgg	660
agctctgaag	ggtggtgcaa	agccctctcc	acctgtgggt	cccatttcgc	tgtggttatc	720
ttgttctttg	ggccctgctg	cttcaactct	ctgaggcctt	ctaccactct	gcccatagac	780
aagatggtgg	ctgtgttcta	cacagtata	accgcgatcc	tgaacctgt	catctactct	840
ctgagaaatg	ctgaaatgag	gaaggccatg	aagaggctgt	ggattaggac	attgagacta	900
aatgagaaa						909

<210> 381

<211> 947

<212> DNA

<213> Unknown (H38g230 nucleotide)

<220>

<223> Synthetic construct

<400> 381

cttatagcta	caggaaactg	gacaagaata	agtgagttaa	tcctcatgag	cttctcttcc	60
ctgctacttg	aaatacagtc	attactcttt	ctgacatttc	taaccatcta	cctggtcacc	120
ctgatgggaa	actgcctcat	cattctgggt	accctagctg	accccatgct	acacagcccc	180
atgtacttct	tcctcagaaa	cttatctttc	ctggagattg	gcttcaacct	agtcattgtg	240
cccaaaatgc	tggggaccct	gcttgcccag	gacacaacca	tctccttctt	tggctgtgcc	300
actcagatgt	atttcttctt	cttcttttga	gtggctgaat	gcttctcca	ggctaccatg	360
gcatatgacc	gctatgtggc	catctgcagt	cccttgcact	acccagtcac	catgaaccac	420
aggactcggtg	ccaaactggc	tgctgcctcc	tgggtcccag	gcttctctgt	agctactgtg	480
cagaccacat	ggctcttcag	ttttccattc	tgtggcacca	acaagggtgaa	ccacttcttc	540
tgtgacagcc	cacctgtgct	gaggctgggt	tgtgcagaca	cagcactgtt	tgagatctac	600
gccatcgctg	gaaccattct	gggtggtcatg	atcccctgct	tgctgatctt	gtgttcctat	660
actcgcatgt	ctgctgccat	cctcaagatc	ccatcagcta	aagggaagaa	taaagccttt	720
tctacatggt	cctcaacact	ccttgttgtc	tctcttttct	atatatcatt	aagcctcacc	780
tacttcggc	ctaaatcaaa	taattcacct	gagggcacga	agctgctatc	attgtcctac	840
actgttatga	ctcccatgtt	gaaccccat	atctacagcc	tgagaaataa	cgagggtgaag	900
aatgccctca	gcaggacggg	ctctaaggcc	ctagccctca	gaaactg		947

<210> 382

<211> 927

<212> DNA

<213> Unknown (H38g231 nucleotide)

<220>

<223> Synthetic construct

<400> 382

atgcctaatt	tcacggatgt	gacagaattt	actctcctgg	ggctgacctg	tcgtcaggag	60
ctacaggttc	tcttttttgt	ggtgttccta	gcggtttaca	tgatcactct	gttgggaaat	120
attggtatga	tcattttgat	tagcatcagt	cctcagcttc	agagtcccat	gtactttttc	180
ctgagtcac	tgtcttttgc	ggacgtgtgc	ttctcctcca	acgttaccac	caaaatgctg	240

gaaaacttat	tatcagagac	aaaaaccatt	tcctatgtgg	gatgcttgg	gcagtgtctac	300
tttttcattg	ccgttggtcca	cgtggaggtc	tatatcctgg	ctgtgatggc	ctttgacagg	360
tacatggccg	gctgcaaccc	tctgctttat	ggcagtaaaa	tgtctaggac	tgtgtgtgtt	420
cggctcatct	ctgtgcctta	tgtctatgga	ttctctgtca	gcctaataatg	cacactatgg	480
acttatggct	tatacttctg	tggaaacttt	gaaatcaatc	acttctattg	tgcagatccc	540
cctctcatcc	agattgcctg	tgggagagtg	cacatcaaaag	aaatcacaaat	gattgtttatt	600
gctggaatta	acttcacata	ttccctctcg	gtggctcctca	tctcctacac	tctcattgta	660
gtagctgtgc	tacgcatgcg	ctctgccgat	ggcaggagga	aggcgttctc	cacctgtggg	720
tcccacttga	cggctgtttc	tatgttttat	gggaccccca	tcttcatgta	tctcaggaga	780
cccactgagg	aatccgtaga	gcagggcaaa	atggtggctg	tgttttacac	cacagtaatt	840
cctatgttga	atcccatgat	ctacagtctg	agaaataagg	atgtaaaaga	agcagtcaac	900
aaagcaatca	ccaagacata	tgtgagg				927

<210> 383

<211> 960

<212> DNA

<213> Unknown (H38g232 nucleotide)

<220>

<223> Synthetic construct

<400> 383

atgcttcata	ccaacaatac	acagtttcac	ccttccacct	tcctcgtagt	gggggtccca	60
gggctggaag	atgtgcatgt	atggattggc	ttcccttct	ttgcggtgta	tctaacagcc	120
cttctaggga	acatcattat	cctgtttgtg	atacagactg	aacagagcct	ccaccaaccc	180
atgttttact	tcctagccat	gttgcccggc	actgatctgg	gcttgtctac	agcaaccatc	240
cccaagatgc	tgggaatttt	ctggtttaat	cttgagagaga	ttgcatttgg	tgcctgcac	300
acacagatgt	ataccattca	tatatgcact	ggcctggagt	ctgtggtact	gacagtcacg	360
ggcatagatc	gctatatgtc	catctgcaac	cccctgagat	atagcatgat	ccttaccac	420
aaggtaatag	gcattctggg	catagtcac	attgtcagga	ctttggtatt	tgtgactcca	480
ttcacatttc	tcacctgag	attgccttcc	tgtggtgtcc	ggattatccc	tcatacctat	540
tgtgaacaca	tgggcttggc	aaagttagct	tgtgccagta	ttaatgttat	atatggattg	600
attgccttct	cagtgggata	cattgacatt	tctgtgattg	gattttccta	tgtccagatc	660
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caccgctttg	gccacaacat	ccctcattac	atccacattc	ttctggccaa	tctgtatgtg	840
gtttttcccc	ctgctcttaa	ctctgtttatc	tatggggtca	aaacaaaaca	gatacgagag	900
caggtaactta	ggataactcaa	ccctaaaagc	ttttggcatt	ttgaccccaa	gaggatcttc	960

<210> 384

<211> 936

<212> DNA

<213> Unknown (H38g233 nucleotide)

<220>

<223> Synthetic construct

<400> 384

atggaacaac	acaatctaac	aacggtgaat	gaattcattc	ttacgggaat	cacagatatc	60
gctgagctgc	aggcaccatt	atttgcattg	ttcctcatga	tctatgtgat	ctcagtgatg	120
ggcaatttgg	gcatgattgt	cctcaccaag	ttggactcca	ggttgcaaac	ccctatgtac	180
ttttttctca	gacatctggc	tttcatggat	cttggttatt	caacaactgt	gggacccaaa	240
atgttagtaa	attttggtgt	ggataagaat	ataatttctt	attatttttg	tgcaacacag	300
ctagctttct	ttcttgtgtt	cattggtagt	gaacttttta	ttctctcagc	catgtcctac	360
gacctctatg	tggccatctg	taaccctctg	ctatacacag	taatcatgtc	acgaagggta	420
tgtcagggtg	tggtagcaat	cccttacctc	tattgcacat	tcatttctct	tctagtccac	480
ataaagattt	ttactttatc	cttctgtggc	tacaacgtca	ttagtcattt	ctactgtgac	540
agtctccctt	tgttaccttt	gctttgttca	aatacacatg	aaattgaatt	gataattctg	600
atctttgcag	ctattgattt	gatttcatct	cttctgatag	ttcttttata	ttacctgtct	660
atccttgtag	ccattctcag	gatgaattct	gctggcagac	aaaaggcttt	ttctacctgt	720
ggagcccacc	tgacagtggg	catagtgttc	tatgggactt	tgcttttcat	gtacgtgcag	780

cccaagtcca	gtcattcctt	tgacactgat	aaagtggctt	ccatatttta	caccctgggt	840
atccccatgt	tgaatccctt	gatctatagt	ttacgaaaca	aagatgtaaa	atatgccta	900
cgaaggacat	ggaataactt	atgtaatat	tttgtt			936

<210> 385

<211> 945

<212> DNA

<213> Unknown (H38g234 nucleotide)

<220>

<223> Synthetic construct

<400> 385

atgatgtggg	aaaactggac	aattgtcagt	gaatttggtc	tcgtgagctt	ctcagccctg	60
tccactgagc	ttcaggctct	actgtttctc	cttttcttga	ccatttactt	ggttacttta	120
atgggcaatg	tcctcatcat	cctggtcact	atagctgact	ctgcactaca	aagtccatg	180
tacttcttcc	tcagaaactt	gtccttcctg	gagatagggt	tcaacttggg	cattgtgccc	240
aagatgctgg	ggaccctgat	cattcaagac	acaaccatct	ccttccttgg	atgtgccact	300
cagatgtatt	tcttcttctt	ttttggggct	gctgagtgtc	gcctcctggc	caccatggca	360
tatgaccgct	acgtggccat	ctgtgacccc	ttgcactacc	cagtcacat	gggccacata	420
tcctgtgccc	agctggcagc	tgccctcttg	ttctcagggt	tttcagtggc	cactgtgcaa	480
accacatgga	ttttcagttt	ccctttttgt	ggccccaaca	gggtgaacca	cttcttctgt	540
gacagccctc	ctgttattgc	actggtctgt	gctgacacct	ctgtgtttga	actggaggct	600
ctgacagcca	ctgtcccat	cattctcttt	cctttcttgc	tgatcctggg	atcctatgtc	660
cgcacctctc	ccactatctt	caggatgccg	tcagctgagg	ggaaacatca	ggcattctcc	720
acctgttccg	cccacctctt	ggttgtctct	ctcttctata	gcactgccat	cctcacgtat	780
ttccgacccc	aatccagtgc	ctcttctgag	agcaagaagc	tgctgtcact	ctcttccaca	840
gtggtgactc	ccatgttgaa	ccccatcatc	tacagctcaa	ggaataaaga	agtgaagggt	900
gcactgaagc	ggcttatcca	caggaccctg	ggctctcaga	aacta		945

<210> 386

<211> 931

<212> DNA

<213> Unknown (H38g235 nucleotide)

<220>

<223> Synthetic construct

<400> 386

atggccaaaa	ccaataattc	agaagttact	gaattcatcc	tcttgggact	cacagacaat	60
ccagagctcc	aagccctttt	ttagggggat	ctttctagtg	atcaatttaa	gtagtgtcat	120
gggtagcctt	gggttaatta	tgctaattca	tatcagtcct	cagcttcaca	cagctatgta	180
ttttttctc	agccacgtag	cttttgttta	tttttgctac	acctctcta	tcaccctaa	240
cagcctagtg	aacctcctcc	aagaaactaa	aagaatatcc	ttacctactt	gtgcctctca	300
gttgcattgc	tttatcatgt	ttgtggtttg	tgacatgtat	gtgctctcag	ccatggcata	360
tgacagggat	gtggccatct	gcaacccttt	actctatagt	atcatcatga	acagaagggt	420
ctgtattcaa	atgggtggtaa	gtacatattt	gtatggcttt	tctgtgagac	tcctacaggc	480
aattcttaca	ttccacttgt	ctttctgaga	ttcaaatata	ataaataatt	cctattgtga	540
tgatgttccc	ctagcatgtc	tacctatca	taaaaacct	tacaaagatg	taaaagaact	600
gatattgttc	acacttgctg	gtttcaatac	acttttctcc	cttcttatca	tcctcatctc	660
ctacatatca	gtactgtctg	ccattctgag	aattaattca	gctgaaagta	gacaaaaggc	720
atcttctact	tgtgactccc	acctgacttc	tatcatcata	ttttatggta	taattacctt	780
catgtatatg	cagtgaaaaa	caaataattc	tctggataca	gacaaaatag	cttctgtttt	840
ctgtattgtg	aaaattcctt	caatatatag	cctgaggaac	cacgaagtca	aagatgcttt	900
gaagatgatt	atggaaaatc	tatgtcttac	t			931

<210> 387

<211> 552

<212> DNA

<213> Unknown (H38g236 nucleotide)

<220>

<223> Synthetic construct

<400> 387

ttagttaagg	taaaaaaaa	ctagaatatt	tttctctcaa	cagcatatca	ctttttcccc	60
acactttctg	taaataataa	caaattttcta	taaataataa	ataataattt	ctaggtataa	120
tttaatttac	atagtgaac	aagccattct	taggtatatt	ccttagttct	gtcttcgaaa	180
gtctgcatcc	tgtagcagc	tggcgtagtt	ggtgggatac	ttagcagaag	gattgtatgt	240
gtgtcctact	gtttcactgt	cctcctccag	gtccaatgcc	atcaatcact	ttttctgtaa	300
taaatcccta	gggcttggtc	tttcatgcta	caacatttat	atcagcacag	cagtccctgc	360
ctttgcgagg	tttgagtgtc	gcattcattg	ccatatttgg	tcattcatgt	ctcctggaca	420
tatatcctgg	ttgctatcaa	gaggatgtcc	tcagtgggga	gaaaagaatt	gtctatttgt	480
gtctcccacc	tgaaaactag	caccattttt	catacagccc	tcttttatgt	gtacttacag	540
cctgattttt	tt					552

<210> 388

<211> 963

<212> DNA

<213> Unknown (H38g237 nucleotide)

<220>

<223> Synthetic construct

<400> 388

atgtctgggg	acaacagctc	cagcctgacc	ccaggattct	ttatcttgaa	tggcgttcct	60
gggctggaag	ccacacacat	ctggatctcc	ctgccattct	gctttatgta	catcattgct	120
gtcgtgggga	actgtgggct	catctgcctc	atcagccatg	aggaggccct	gcaccggccc	180
atgtactact	tcctggccct	gctctccttc	actgatgtca	ccttggtcac	caccatggta	240
cctaatatgc	tgtgcatatt	ctggttcaac	ctcaaggaga	ttgactttaa	cgccctgcctg	300
gcccagatgt	tttttgtcca	tatgctgaca	gggatggagt	ctggggtgct	catgctcatg	360
gcccgtggacc	gctatgtggc	catctgctac	cccttacgct	atgccaccat	ccttaccaac	420
cctgtcatcg	ccaaggctgg	tcttgccacc	ttcttgagga	atgtgatgct	catcatccca	480
ttcactctcc	tcaccaagcg	cctgccctat	tgccggggga	acttcatccc	ccacacctac	540
tgtgaccata	tgtctgtggc	caaggatatcc	tgtggcaatt	tcaaggtaaa	tgctatttat	600
ggtctgatgg	ttgctctcct	gattgggtgtg	tttgatatct	gctgtatctc	tgtatcttac	660
actatgattt	tgcaggctgt	tatgagcctg	tcatcagcag	atgctcgtca	caaagccttc	720
agcacctgca	catctcacat	gtgttcattt	gtgatcacct	atgttgctgc	ttttttcact	780
tttttcactc	atcgttttgt	aggacacaat	atcccaaacc	acatacacat	catcgtggcc	840
aacctttatc	tgctactgcc	tcctaccatg	aacccaattg	tttatggagt	caagaccaag	900
cagattcagg	aagggtgtaat	taaattttta	cttgagagaca	aggttagttt	tacctatgac	960
aaa						963

<210> 389

<211> 400

<212> DNA

<213> Unknown (H38g238 nucleotide)

<220>

<223> Synthetic construct

<400> 389

tgtttctgtg	gctttgctgt	tctcaccagt	tgctgtttct	gtctaacccc	ggagaggttaa	60
ataacaccct	gagaatggcc	ctaggctcac	acagggtttcc	cagttagcca	atcaagaaga	120
attacaaatg	gccacactat	cagccagagc	tgctgcctca	ctggagtcc	aaaacggaga	180
ggatctgctc	ccctgcaccc	tcaggcttgg	aaatgctgag	aaatgctaag	ccactgggggt	240
ttcaattata	cctaatttaa	aacgagcaaa	gtagacttgc	cccccaagg	gttccacaaa	300
aaacttaaag	cctggcagct	cagccctgag	ttcatactgc	ttaaaagaca	ccggggggagg	360
aggttaagtga	tcagggtgaga	gaagttcggt	ccccagagag			400

<210> 390

<211> 954

<212> DNA

<213> Unknown (H38g239 nucleotide)

<220>

<223> Synthetic construct

<400> 390

atgaagccaa	caatacaaat	ggcttcagga	aatctcacat	gggtgacgga	gttcattctt	60
gtgggagtct	cagatgatcc	ggagctccag	attccccctc	tcctgggtctt	cctgggtgctc	120
tatttgctga	ccgtggcagg	gaacctgggc	atcatcacc	tcaccagtgt	tgacctcaa	180
cttcaaacc	ccatgtactt	tttctctga	cacttggtta	ttattaatct	ttgcaattct	240
actgtcgttg	cccctaaaat	gctgggttaac	ttcttggtta	ccaagaaaac	catatcatac	300
tatggatgtg	cagcccaact	gggtggattc	ttggttttca	ttgtggctga	gattttcacg	360
ctggctgcaa	tggcctatga	ccgctatgtg	gctatttgga	gccctctgct	ctacgccgta	420
gtgggtgtctc	caaagggtgtg	tcgtctgctg	gtgtccctca	cataccttca	gagtcttatac	480
acagcactga	ctgtctcttc	ctgtgtgttc	tctgtgtcat	actgttcttc	caacattatc	540
aaccattttt	actgtgatga	tgtccctttg	ctagcattgt	cctgttctga	tacctacatt	600
ccagaaacag	cagtctttat	cttttcagg	accaacttgc	ttttctccat	gatcgtttgtt	660
ctgatatacct	acttcaacat	tgttattacc	attttgagga	tacgttcttc	agaaggacga	720
caaaaagcct	tttccacctg	tgttcttcac	atgatagctg	tgggtgtgtt	ctatgggact	780
ctccttttca	tgtatttgca	accaaggagt	aatcattcat	tagatactga	caaaatggct	840
tcggtcttct	acaccctggg	gataccagtg	ctgaaccctc	taatctacag	cctcaggaac	900
aagaacgtga	aggatgcact	aaagaggttc	ctagataacc	catgccgatac	actc	954

<210> 391

<211> 945

<212> DNA

<213> Unknown (H38g240 nucleotide)

<220>

<223> Synthetic construct

<400> 391

atgttggtccc	caaaccacac	catagtgaca	gaattcattc	tcttaggact	gacagacgac	60
ccagtgtctag	agaagatcct	gtttgggggtg	ttcttggcga	tctacctaat	cacactggca	120
ggcaacctgt	gcatgatcct	gctgatcagg	accaattccc	aactgcaaac	acccatgtat	180
ttcttctctg	gtcacctctc	ctttgttagac	atttgcattt	cttccaatgt	tactccaaat	240
atgctgcaca	atttctcttc	agaacagaag	accatctcct	acgctggatg	cttcacacag	300
tgtcttctct	tcatgcacct	agtgatcaat	gagttttact	tccttgcttc	aatggcattg	360
gatecgtatg	tagccatttg	cagcccttta	cattacagtt	ccaggatgtc	caagaacatt	420
tgcattctct	tggctactgt	gccttacatg	tatggcttcc	ttaatgggct	ctctcagaca	480
ctgctgacct	ttcacttatac	cttctgtggc	tcccttgaaa	tcaatcattt	ctactgcgct	540
gatectcctc	ttatcatgtc	ggcctgctct	gacaccctgt	tcaaaaagat	ggcaatgttt	600
gtagttgcag	gctttactct	ctcaagctct	ctcttcatca	ttcttctgtc	ctatcttttc	660
atttttgcag	cgatcttcag	gatccgttct	gctgaaggca	ggcacaaagc	cttttctacg	720
tgtgcttccc	acctgacaat	agtcactttg	ttttatggaa	ccctcttctg	catgtacgta	780
aggcctccat	cagagaagtc	tgtagaggag	tccaaaataa	ttgcagtctt	ttatactttt	840
ttgagcccaa	tgtgaaccc	attgatctat	agcctacgga	acagagatgt	aatccttgcc	900
atacaacaaa	tgattagggg	aaaatccttt	tgtaaaattg	cagtt		945

<210> 392

<211> 939

<212> DNA

<213> Unknown (H38g241 nucleotide)

<220>

<223> Synthetic construct

<400> 392

atgcctatag	ctaacgacac	ccagttccat	acttcttcat	tcctactgct	gggtatccca	60
gggctagaag	atgtgcacat	ctggattgga	ttcccttttt	tctctgtgta	tcttattgca	120

ctcctgggaa	atgctgctat	cttctttgtg	atccaaactg	agcagagtct	ccatgagccc	180
atgtactact	gcctggccat	gttggattcc	attgacctga	gcttgtctac	ggccaccatt	240
cccaaaatgc	tgggcatctt	ctggttcaat	atcaaggaaa	tatcttttgg	aggctacctt	300
tctcagatgt	tcttcacca	tttcttcaat	gtcatggaga	gcatcgtatt	ggtggccatg	360
gcctttgacc	gctacattgc	catttgcaaa	cctcttttgt	acaccatgat	cctcaccagc	420
aaaatcatca	gcctcattgc	aggcattgct	gtcctgagga	gcttgtacat	ggtcattcca	480
ctgggtgttc	tcctcttaag	gttgcccttc	tgtggacatc	gtatcatccc	tcatacttac	540
tgtgagcaca	tgggcattgc	ccgtctggcc	tgtgccagca	tcaaagtcaa	cattatgttt	600
ggtcttggca	gtatttctct	cttgttattg	gatgtgtccc	ttattattct	ctcccatc	660
aggatcctct	atgctgtctt	ctgcctgccc	tcctgggaag	ctcgactcaa	agctctcaac	720
acctgtggct	ctcacattgg	tgttatctta	gccttttcta	caccagcatt	tttctctttc	780
tttacacact	gctttggcca	tgatattccc	caatatatcc	acattttctt	ggctaatacta	840
tatgtggttg	ttcctcccac	cctcaatcct	gtaatctatg	gggtcagaac	caaacatatt	900
agggagacag	tgctgaggat	tttcttcaag	acagatcac			939

<210> 393

<211> 984

<212> DNA

<213> Unknown (H38g242 nucleotide)

<220>

<223> Synthetic construct

<400> 393

atgcatactt	tcaagtttgt	tctagatttc	aacatgaaga	atgtcactga	agttacctta	60
tttgactga	agggcttcac	agacaatctt	gaactgcaga	ctatcttctt	cttcctgttt	120
ctagcaatct	acctcttcac	tctcatggga	aatttaggac	tgattttagt	ggtcattagg	180
gattcccagc	tcacaaaacc	catgtactat	tttctgagta	tgttgtcttc	tgtggatgcc	240
tgctattcct	cagttattac	cccaaataatg	ttagtagatt	ttacgacaaa	gaataaaagtc	300
atttcattcc	ttggatgtgt	agcacagggtg	ttcttctgct	gtagttttgg	aaccacagaa	360
tgctttctct	tggctgcaat	ggcttatgat	cgctatgtag	ccatctacaa	ccctctctg	420
tattcagtga	gcatgtcacc	cagagtctac	atgccactca	tcaatgcttc	ctatgttgct	480
ggcattttac	atgtactat	acatacagtg	gctacattta	gcctatcctt	ctgtggagcc	540
aatgaaatta	ggcgtgtctt	ttgtgatata	cctcctctcc	ttgctatttc	ttattctgac	600
actcacacaa	accagcttct	actcttctac	tttgtgggct	ctatcgagct	ggtcactatc	660
ctgattgttc	tgatctccta	tgggttgatt	ctggttgcca	ttctgaagat	gtattctgct	720
gaagggaaga	gaaaagtctt	ctccacatgt	ggagctcacc	taactggagt	gtcaatttat	780
tatgggacaa	tcctcttcat	gtatgtgaga	ccaagttcca	gctatgcttc	ggaccatgac	840
atgatagtgt	caatatctta	caccattgtg	attcccttgc	tgaatcccgt	catctacagt	900
ttgaggaaca	aagatgtaaa	agactcaatg	aaaaaaatgt	ttgggaaaaa	tcagggttatc	960
aataaagtat	attttcatac	taaa				984

<210> 394

<211> 984

<212> DNA

<213> Unknown (H38g243 nucleotide)

<220>

<223> Synthetic construct

<400> 394

atgaatggag	ccaacagctc	cagcctgaca	ccaagatatt	tcattctcag	tggcgttcct	60
gggctggaag	ctgcacacat	ctggatctcc	ctgcctttct	gcttcatgta	catcattgtt	120
gttttgggga	actgtggact	tatatacctc	attagccatg	aggaggccct	gcaccaaccc	180
acctactact	tcctagactt	gctgtctctt	acagatgtta	ctggatgcac	ctcatttgtt	240
cccaatatgt	tatgtatttt	ttggtttggc	ctcaaggaaa	ttgactttaa	tgctgtcctt	300
gtgcagatgt	ttttcatcca	catgctgaca	ggcatggagt	ctggggcgct	catgcttatg	360
gctctagacc	gctatgtggc	catttgctac	cctctacact	attccaccat	cttcaccaac	420
actgtaatta	ccaaagtggg	gcttgtcacc	ttcattcaaa	gtgtgttgct	tatgattcca	480
tttgctttcc	tgatcaagtg	tcttccctat	tgcaggggca	acctcatcca	ccacacctat	540
tttaacatat	gtctgtggcc	aaattatcct	gtggtaatgt	ccagattaat	gccatctatg	600

gtctcatagc	tgccatattg	attggggggg	ttgacatggt	ctgtatctcc	atgtcttaca	660
ccatgattat	ccgtgctgta	gtgaatttgt	catctgcaga	tgctgccaca	aagccttcag	720
tacctgtaca	gcacatatat	gtgctatttt	catcacttat	gtcccagcct	ttttcaactt	780
cttcactcac	cgctttgggg	gacacacccat	acctcatcat	gttcacattt	ttatagccaa	840
cctttacctg	atgctgcctc	ccaccttaaa	tccaattgtc	tatggagtga	agaccaagca	900
gatccgtgaa	ggagtgatca	aattgttttt	tagagagaaa	ggatatttta	gtatgacata	960
aatctatgat	atagaagtct	gaat				984

<210> 395

<211> 903

<212> DNA

<213> Unknown (H38g244 nucleotide)

<220>

<223> Synthetic construct

<400> 395

atggccagta	caaataatgt	gactgagtc	atgatcacca	gccttttcca	ggatccagca	60
gtgcagagag	tgtgctttgt	ggtgtttctc	cccgtgtact	ggccatggag	gtgggcaatg	120
gcctcatcgt	tctgacggtc	agtatcagca	agagtctgca	ttcccctgtg	tacttcttcc	180
tgagctacct	gtcattgatg	gagatcagtt	acttcaactgt	tgcccctaaa	ttcatcacag	240
acttacttgc	caagattaaa	gccatctctc	tggaggggcta	tctgggtcag	atattcttgc	300
acttcttttg	catcccctgg	atctttctgc	tcccactgat	gaccaatgac	caatatatgg	360
ccaactgcaa	actttattac	tacacaacca	tcatgagctg	cctgtctgtc	accttctggg	420
ggctgggttc	tggctgaggg	gcataattca	ctcaatgggt	cagatccttg	tctctgtcca	480
attgttcttc	tgtggtccca	acatgattga	ccactcattc	tgtgacctcc	aggtcttatt	540
caagcttgcc	tgcactgaca	cctttgtgga	gggggttatt	gtgttgggca	acagtgaatt	600
agtatctgtc	ttcttcctta	tcttggtgtc	ctcttaatat	catcatccta	gtcaacttga	660
ggaaccattc	tgcagagggg	aggtgcaaa	ccctctccac	ctgtgcctct	tatcttgtat	720
tttgaacttg	ccattttcct	ctacgtgtga	ctctcctcca	cctttactaa	agataaaactc	780
gtggctgtat	tttactgtgt	catcaccccc	atgctgaacc	ccttcactca	cacgcttggg	840
aatgcagaga	tgaaaatcac	catgaggaga	ttgttgggca	ggacagtga	ctcaggaatg	900
gaa						903

<210> 396

<211> 972

<212> DNA

<213> Unknown (H38g245 nucleotide)

<220>

<223> Synthetic construct

<400> 396

gggagctgaa	agcaatgaaa	gtcttgacct	cctatctgtc	ttcctgactg	gcatccagc	60
actggaggcc	caacatgggt	ggctctccat	ccctttcttc	accatgtaca	ttgtggccat	120
tgtgggaaac	atcctaatta	tggcagcagt	gcaggaagac	tctgccctac	atgagcccat	180
gtacttattt	ctctccatgt	tggctgtcac	tgaggtgggc	gtctctgtgt	ctacactgct	240
actgttacag	gcattctttg	gtttgatgcc	cacagagttg	actttgatgg	ctgcctggcc	300
cagatgttct	tcattcacac	cttctcctgc	atggagtcag	gggtcctact	agccatgagc	360
tatgaccgct	ttgtagccat	ctacaacctc	ctgcgctata	cagccatcct	gaccctgccc	420
cgtattatct	gcattgggtct	gggcattaca	ctgaagagtg	tggcactcat	ggccccactt	480
ccaatccttt	tgaggcaact	gccctattgc	cacactaatg	tcctctcaca	ctcctactgc	540
ctccactcag	atctgatcca	gctgccttgt	gcagatacta	aactcaacag	catcctgggc	600
ttagccattg	ttctcgcaaa	tttcgggctg	gactcattgc	ttatcgtggg	ctcttatgtc	660
ttgattcttt	atacagtgat	gggcattgct	tctggagagg	gacggtggaa	ggctctcaac	720
acatgtgtgt	cacatatattg	tgcagtgtct	atatattatg	tgcccatgat	tggggtgtct	780
gtgatgcac	gtgctgccaa	acatgtctct	cccattgtcc	acacacttat	gtctagcatc	840
tgccttttgg	tgccacctgt	acttaatccc	atcatctata	gtgttaagac	ccagacaata	900
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agtcaggaac	tg					972

<210> 397
 <211> 874
 <212> DNA
 <213> Unknown (H38g246 nucleotide)

<220>
 <223> Synthetic construct

<400> 397
 actttgttta ttatttcaaa atttcaaggc tgctgaaagg taggtcttta tacacagtca 60
 ctttatttgc tagctgagta ttttcatcgg gggcaactga tgaaaatgtt gacttccact 120
 aacctaagcc tgtccgttgt tactatcgta tcttccagtt caacgtcagg gaaatagttt 180
 ttggtgcttt ccttgtttat atacagatgt ttatgactta tctatgcact ggcctggaat 240
 ctggggact gataatcctg gccatagacc actatgtcgt aattcgcaat ccactgagat 300
 ataccatgat tctcatgaac aatgtggtag ccacccatagg aagtcacgat aattagatct 360
 ttaatcttta tcatcccttt tgagtttctc atcttgcgtg tgctattctg tgctgcccac 420
 atcatccccc acaccaaagt tgagcacatg ggcattgccc atcttctctg tgccagtgtc 480
 agagccaata atatgtttgg gatgggtggc ttttggggg atttattgac cttattgcaa 540
 ttggtttctc ctatgtaaag aaactacaca ctgtttcact taccaccatg gaatggccag 600
 ttcgaggctc tcaatacctg tggttcccat gtttgcacat ctcactctct acatcccagt 660
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 caatgtatat acggttgttc tacctgtatt caaccctgtt atctatggga tcaggaaaaa 780
 acagatccca gactagggtg tagacctaaa gacatttgat gatcagtcac ttctagtcat 840
 gatgatatat atattgggat atatatgcaa atat 874

<210> 398
 <211> 936
 <212> DNA
 <213> Unknown (H38g247 nucleotide)

<220>
 <223> Synthetic construct

<400> 398
 atggatgaag ccaatcactc tgtggtctct gagtttgtgt tcttgggact ctctgactcg 60
 cggaagatcc agctcctcct ctctcctctt ttctcagtg tctatgtatc aagcctgatg 120
 ggaaatctcc tcattgtgct aactgtgacc tctgaccctc gtttacagtc ccccatgtac 180
 ttcttgctgg ccaacctttc catcatcaat ttggtatttt gttcctccac agtcccaag 240
 atgatttatg accttttcag gaagcacaag accatctctt ttgggggctg tgtagttcag 300
 atcttcttta tccatgcagt tgggggaact gagatggtgc tgctcatagc catggctttt 360
 gaccgatatg tggccatatg taagcctctc cactacctga ccatcatgaa cccacaaagg 420
 tgcattttgt ttttagtcat ttcttggtt ataggtatta ttactcagt gattcagttg 480
 gcttttggtg tagacctgtt gttctgtggc cctaataaat tagatagttt cttttgtgat 540
 ctctctgat ttatcaaact ggcttgata gagacctaca cattgggatt catgggtact 600
 gccaatagtg gatttatctc tctggcttct tttttaattc tcataatctc ttacatcttt 660
 attttggtga ctgttcagaa aaaatcttca ggtggtatat tcaaggcttt ctctatgctg 720
 tcagctcatg tcattgtggt ggttttggtc tttgggccat taatcttttt ctatattttt 780
 ccatttccca catcacatct tgataaattc cttgccatct ttgatgcagt tatcactccc 840
 gttttgaatc cagtcactta tacttttaga aataaagaga tgatggtggc aatgagaaga 900
 cgatgctctc agtttgtgaa ttacagtaaa atcttt 936

<210> 399
 <211> 503
 <212> DNA
 <213> Unknown (H38g248 nucleotide)

<220>
 <223> Synthetic construct

<400> 399
 aagcagtcca gtggtgacag tgggaaccag accacctggc tgatcctagt gggcttcggg 60

gagctgcaat	acctgggctt	ccttcccttc	actctcttcc	tggccatcta	tgtggtgaca	120
gttggggcaa	tgccctcatc	atgctggctg	tggcctctag	tcggacactg	cacccaccaa	180
tgtacttctt	cctctgccac	ttctccctgc	tggagattgg	ctatacctcc	aacgtcatac	240
tatggctgtt	gcagagtttc	ttggagggga	aggaagtcac	ctctctagtc	agctgtctgg	300
ctcagttcta	cgtgttttcc	tcgctggctg	cagctgagtg	cctcctgcta	tctgccgtgt	360
cctatgactg	ttacttggcc	atctgctgcc	cccttcaacta	tcctgccctg	atgagcacct	420
ggttttgtca	ctgcctggcc	gctgggtgctt	ggttcagtg	cttcttctcc	tctgccttca	480
ctatggccct	ggcagcacct	ctg				503

<210> 400

<211> 963

<212> DNA

<213> Unknown (H38g249 nucleotide)

<220>

<223> Synthetic construct

<400> 400

atgctaacac	tgaataaaac	agacctaaata	ccagcttcat	ttattctgaa	tggagtccca	60
ggactgggaag	acacacaact	ctggatttcc	ttccattctt	gctctatgta	tgttgtggct	120
atggtaggga	atttgtggact	cctctacctc	attcactatg	aggatgccct	gcacaaaccc	180
atgtactact	tcttggccat	gccttccctt	actgaccttg	ttatgtgctc	tagtacaatc	240
cctaaagccc	tctgcatctt	ctggtttcat	ctcaaggaca	ttggatttga	tgaatgcctt	300
gtccagatgt	tcttcatcca	caccttcaca	gggatggagt	ctgggggtgct	tatgcttatg	360
gccctggatc	gctatgtggc	catctgctac	cccttacgct	attcaactat	cctcaccaat	420
cctgtaattg	caaagggttg	gactgccacc	ttcctgagag	gggtattact	cattattccc	480
tttactttcc	tcaccaagcg	cctgccctac	tgcagaggca	atatacttcc	ccatacctac	540
tgtgaccaca	tgtctgtagc	caaattgtcc	tgtggtaatg	tcaagggtcaa	tgccatctat	600
ggtctgatgg	ttgccctcct	gattgggggc	tttgacatac	tgtgtatcac	catctcctat	660
accatgattc	tccggggcag	ggtcagcctc	tcctcagcag	atgctcggca	gaaggccttt	720
aatacctgca	ctgcccacat	ttgtgccatt	gttttctcct	atactccagc	tttcttctcc	780
ttcttttccc	accgctttgg	ggaacacata	atccccctt	cttgccacat	cattgtagcc	840
aatatttatc	tgctccttacc	accactatg	aaccctattg	tctatggggt	gaaaacccaa	900
cagatacgag	actgtgtcat	aaggatcctt	tcaggttcta	aggataccaa	atcctacagc	960
atg						963

<210> 401

<211> 945

<212> DNA

<213> Unknown (H38g250 nucleotide)

<220>

<223> Synthetic construct

<400> 401

atgacaacac	accgaaatga	cacctctctc	actgaagctt	cagacttccct	cttgaattgt	60
tttgtcagat	ccccagctg	gcagcactgg	ctgtccctgc	ccctcagcct	ccttttccctc	120
ttggccgtag	gggccaacac	cacctcctg	atgacctctt	ggctggaggc	ctctctgcac	180
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gtcatcccca	aggctcctgac	catcttctgg	tttgacctca	ggcccatcag	cttccctgcc	300
tgcttctctc	agatgtacat	catgaattgt	ttcctagcca	tggagtcttg	cacattcatg	360
gtcatggcct	atgatcgtaa	tgtagccatc	tgccaccac	tgagatatcc	atcaatcatc	420
actgatcact	ttgtagtcac	ggctgccatg	tttattttga	ccagaaatgt	gcttatgact	480
ctgcccatcc	ccatcccttc	agcacaaactc	cgttattgtg	gaagaaatgt	cattgagaac	540
tgcactctgt	ccaatatgtc	tgtttccaga	ctctcctgcg	atgatgtcac	catcaatcac	600
ctttaccaat	ttgctggagg	ctggactctg	ctaggatctg	acctcatcct	tatcttccctc	660
tcctacacct	tcattctgcg	agctgtgctg	agactcaagg	cagagggtgc	cgtggcacaag	720
gccctaagca	catgtggctc	ccacttcatg	ctcatcctct	tcttcagcac	catccttctg	780
gtttttgtcc	tcacacatgt	ggctaagaag	aaagtcctcc	ctgatgtgcc	agtcttgctc	840
aatgttctcc	accatgtcat	tcctgcagcc	cttaacccca	tcatttacgg	ggtgagaacc	900
caagaaatta	agcaggggaat	gcagaggttg	ttgaagaaag	ggtgc		945

<210> 402
 <211> 906
 <212> DNA
 <213> Unknown (H38g251 nucleotide)

<220>
 <223> Synthetic construct

<400> 402
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 gatgatcctc agcttcatcc cacttctctt gccctcttcc tccccatcta tgtagtcatg 120
 gtgatggaaa cctgggcctc cttgccttca ttgtgggcag tccccaatc ctcaccccca 180
 tgtatttctt cctcagcaac tggctctctg ttgacttctg ttattcttca gtaacagtcc 240
 caaaaatata aatgggggtt ttttctgact gccaaagtctt ctccttctct gggtgcatgg 300
 cccagttaa gctgctttta aatatttgct gacaccgagt tcttctctct ggccctccatg 360
 gtctattacc gctaagaggc cgtctgcaat cctctgctct accatatcac catgtcccca 420
 aagctctgct tgcagctggt ggccaccagc tatgaacatg gtgctcccta gtagcacaat 480
 ctttcatctg atcttctgta agtctgtgcc atcattcatt aattctgtta tttctctccc 540
 caccgaggct ttaaaaactc tctgctctg acatgcaagg ccttcaactt cttacctttg 600
 cctctagtag ctttaatgta tcgggtgtccc ggacaatctt ccttgctctc atttaattat 660
 gagaatgccc tcgggtttgag gcaaacactt gtgcttccca cctgacagca gtcagcctgt 720
 gctatggaac cacagtgttc cttcacctgc acctatcctt gaagtgttca ccagacagag 780
 atatgctggg ctctgtttta cacagtggct attctcatgc tcaaccccat ggtccaaagt 840
 ctgaggaaca aggatgtgaa gaaaacattt gggacttctt catgaagggt tacaattcct 900
 ctcctt 906

<210> 403
 <211> 972
 <212> DNA
 <213> Unknown (H38g252 nucleotide)

<220>
 <223> Synthetic construct

<400> 403
 atgcctctat ttaattcatt atgctgggtt ccaacaattc atgtgactcc tccatctttt 60
 attcttaatg gaatacctgg tctggaaaga gtacatgtat ggatctccct cccactctgc 120
 acaatgtaca tcacttctct tgtggggaat cttgggtctg tgtacctcat ttattatgag 180
 gagtcttac atcatccgat gtattttttt tttggccatg ctctctccct cattgacctc 240
 cttacctgca ccaccactct acccaatgca ctctgcatct tctgggttcag tctcaaagaa 300
 attaaactta atgcttgctt ggcccagatg ttctttgttc atgggttcac aggtgtggag 360
 tctgggggtgc tcatgctcat ggctctagac cgctatgtag ccatttgcta ccctttgcgt 420
 tatgctacca cactcaccaa ccctatcatt gccaaaggct agcttgccac cttcctgagg 480
 ggtgtattgc tgatgattcc tttcccatte ttgggttaagc gtttgctttt ctgccaaagc 540
 aatattatct cccatacgta ctgcgaccac atgtctgtag taaagctatc ttgtgccagc 600
 atcaaggtea atgtaatcta tgggtctaat gttgctctcc tgattggagt gtttgacatt 660
 tgttgttatat ctttgtctta cactttgatc ctcaaggcag cgatcagcct ctcttcatca 720
 gatgctcggc agaaggcttt cagcacctgc actgcccata tatctgccat catcatcacc 780
 tatgttccag cattcttcac tttctttgccc caccgttttg ggggacacac aattccccct 840
 tctcttcaca tcattgtggc taatctttat cttcttcttc ccccaactct aaaccctatt 900
 gtttatggag taaagacaaa acagatacgc aagagtgtca taaagttctt ccagggtgat 960
 aagggtgcag gt 972

<210> 404
 <211> 821
 <212> DNA
 <213> Unknown (H38g253 nucleotide)

<220>
 <223> Synthetic construct


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<400> 404
gagagaaatc ccagtgtagc agaaaagtgc cttcaaggga tgactgattc ctctcaccat      60
tatcttttagc ttaactccct ctcttcaggc tgttaatcct cttgtatact atcattacga      120
tagggaattt gggcacggtc attctcattg ggatcagtct cggtttatat gtctgtctcg      180
cctagatttc tgctattcac tttttccatg ctccagagtc tagtaaaatg tttttgaagt      240
acagtgtgct ccttctcttt ctggagtcct gaagcacaga ttaacttctt cagcatcttg      300
tgtatcacag agttcttttc cttggccaca atggcctatg atgacaatgt tgccacttgt      360
gaacctttat tccacccttt caccagtttg agactcaact ggcatttggt tgagaaaaac      420
tgtatcttag agccttcacc tcagccctcc cctcaactct tccgttccac ctccccttct      480
tcaattccca cttgtgtctc cttcagtgac attactttct ggggtcaagt gtccctctgaa      540
acatgactcc caactttaaa ctccctgatt tctctaactc caatgtgaac ttagtaagcc      600
tgtgtgtgct aaccatctgc tgctacccca tcattttaag gtcattatca tcccataact      660
aatctgaaaa acaaattatt gataatcatt ttttttcaga attccactca ttgctcttta      720
ttttctgttc agatgaaaat gtttattaaa ccatttgagg tatcactgac tagttcatta      780
aaagtaaaca ttgtgtacat attcccttaa tgcagattct t              821

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<210> 405

<211> 945

<212> DNA

<213> Unknown (H38g254 nucleotide)

<220>

<223> Synthetic construct

<400> 405

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atgtcttctc tcaatgtcac tgaacccac ctctcttctc tcctgttggt taggaattcc      60
aggattggaa gctgcacaac gctggctagg ctttcccttc tgtgttgat atctgattgc      120
tcttgttgga aatcttatca ttctatttgt tatctggact gataaaaacc ttcaccaacc      180
catgttctac tttctggcca tgctgtcagt catgacctga gtctttctac atctactatc      240
cccaagatgt tgggcatctt ctgggtcagc cttcaggagt tgtgctttgg gtgctgtgtt      300
gctcaagtct tttttatcca ttttttttgc agtcatggag agcattgtac ttcttgtcat      360
gggatttgat cgctatgtgg ctatttgcaa ccccttcagg tagaccaaga tcctcaccaa      420
cagaattact ggtgtgattg ctatggttgt ggttcttaga agcttatgta tgattgctcc      480
catcattttt ctctcatga ggctgcctta ctgtggacat agaatcatcc cttataccta      540
ttgtgagcac atgggagtggt ctgctctggc ttgtgccagc atcagtgtca atgtctctca      600
tggctctggg aatattttta tcttgtttct ggatatgtt cttatcatca tctcttatgc      660
tagaatttta tgcacagtct ttcacctccc ttccaagag gccacactga aggcctctaa      720
tacctgtagc tcccatatct gtgtcatctt agcatttttt ggcccagctc tcttctcctt      780
tctcactcat cgctttgggc atggcatccc acagtataac catattctcc tggctaattc      840
ctatatatag tcattccccc tgctcttaac ccagtcattt atggagttag gaccaagcaa      900
atccaggagc gggtagaaaag tctctttact aaaaattgat tgaat              945

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<210> 406

<211> 970

<212> DNA

<213> Unknown (H38g255 nucleotide)

<220>

<223> Synthetic construct

<400> 406

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gtggaaaatt caccatgggt gactgacttc atctttctcg gcatgacaga taactctcag      60
cttgaagtcc tgctatttgg agtctttctt attgcttaca tcatcactgt gttggagaat      120
ctaggccttg tggttctgat cagagtcagc tcccgcctcc acacccatg tactttttcc      180
tctctaatac gtccttcctt gatgtctgtt tctcttccat tacaattcca cagaatttag      240
cacatttggt ttctaagctg cagtatgttt ctttcccttt cccgtataac ttaaagtgcg      300
ttgtttgtaa tctttgcctc tgctgaatgc aattttttaa acttgcattg cctatgaccg      360
ctttactgcc atctgtcacc cactgttcta ccacattacc atgtcaagag gccattatct      420
tttcttggtg gcaggatgct accttggtgg gttagttaag atgggtcact tgacaacttc      480
catcacacaa ctatcgcttt gtcaaccatg tgtcctccct gccttcttct gtgacattcc      540

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ctcattgttg	gtactggttt	gctcagatcc	ttggatcacc	tcccgatctt	ggtggttggc	600
tgtgggggat	tcaccctggt	cacctctgtt	gtggtgatcc	ttgtctccta	catgtcttcc	660
ctcatgacta	tcctaggaat	tccttagct	tctggaaaac	agagagcctt	ctccacctgt	720
gcctcccaact	tgactgctgt	tagcctgtac	tatgaaacaa	ctatgtacac	ttacttgccc	780
gcctcgcgac	atggatccgg	ggcaggaaat	cagatttgtgt	cagtatttta	tacaatggtg	840
atccccatgt	taaatcctct	catctatagt	ttgagaaatg	aggaagtga	agttgcctta	900
tgaaaaacat	tgagacatag	tccttaatat	tctatttgagt	gtctcaaaaa	tgcaaaatat	960
tctgtgaaga						970

<210> 407

<211> 934

<212> DNA

<213> Unknown (H38g256 nucleotide)

<220>

<223> Synthetic construct

<400> 407

tggcttgatg	aaaaaaaaa	agattctaac	gtgacagaac	ttgtttcttct	gggcctatca	60
tcttcttggg	agctgcagct	atttctctta	ttactatttt	tgttttttta	cattgtctatt	120
gtcctgggaa	acctcttgat	agtggtaaca	gtgcaagccc	atgctcatct	gctccaatct	180
cctatgtatt	atTTTTtagg	tcatctctct	ttcattgacc	tatgcctaag	ctgtgttact	240
ctgccaaga	tgtagggga	tttctacag	cagggcaaga	gcctctcttt	ttcaggatgc	300
ctggcccaga	tctacttctt	ccactttcta	ggagccagt	agatgttttt	gctgacagtt	360
atggcctatg	acaggtatgt	tgccatctgt	aaccctttgc	gctaccttat	aagtcatgaa	420
ccccagcta	tgcttttggg	tggttcttgc	ctgctggtgt	gggggtttta	tccactctat	480
catgcaggtc	atactagtca	tccagctgcc	tttctgtggc	cccaatgaac	tggaacaact	540
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gctgatgata	gccaacagtg	gtctgctctc	tcttgtctgc	ttcttgggtc	tactattctc	660
ttatgctgtc	atcctgatca	ccctgagaa	acacttcggc	cagggccaga	acaagttcct	720
ctctacctgt	gcttctcacc	tgacagtggg	cagcctgac	ttcatgccat	gtatattcat	780
ctatttgagg	cctttctgca	gcttctctgt	ggataagata	ttctccatgt	tttacacagt	840
gatgacacct	atgttgagcc	ccctcatcta	cacactcaga	aatgctgata	tgaagacagc	900
tatgaagaag	ctgaggataa	aaccatgtga	catt			934

<210> 408

<211> 954

<212> DNA

<213> Unknown (H38g257 nucleotide)

<220>

<223> Synthetic construct

<400> 408

atgatgggtg	atcccaatgg	caatgaatcc	agtgtctacat	acttcatcct	aataggcctc	60
cctgggtttg	aagaggetca	gttctggttg	gccttcccat	tgtgtccct	ctaccttatt	120
gctgtgctag	gtaacttgac	aatcatctac	attgtgcgga	ctgagcacag	cctgcatgag	180
cccatgtata	tatttctttg	catgctttca	ggcattgaca	tcctcatctc	cacctcatcc	240
atgcccacaa	tgctggccat	cttctggttc	aattccacta	ccatccagtt	tgatgcttgt	300
ctgtacaga	tgtttgccat	ccactcctta	tctggcatgg	aatccacagt	gctgctggcc	360
atggcttttg	accgctatgt	ggccatctgt	caccactgc	gccatgccac	agtacttacg	420
ttgctcgtg	tcacaaaat	tggtgtggct	gctgtggctg	ggggggctgc	actgatggca	480
cccttctctg	tcttcatcaa	gcagctgccc	ttctgccgct	ccaatatcct	ttcccattcc	540
tactgcctac	accaagatgt	catgaagctg	gcctgtgatg	atatccgggt	caatgtcgtc	600
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ggcacttgcg	tctctcatgt	gtgtgctgtg	ttcatattct	atgtaccttt	cattggattg	780
tccatggtgc	atcgctttag	caagcggcgt	gactctccgc	tgcccgtcat	cttggccaat	840
atctatctgc	tggttctctc	tgtgctcaac	ccaattgtct	atggagtga	gacaaaggag	900
attcgacagc	gcctccttcg	acttttccat	gtggccacac	acgcttcaga	gccc	954

<210> 409
 <211> 959
 <212> DNA
 <213> Unknown (H38g258 nucleotide)

<220>
 <223> Synthetic construct

<400> 409

atgtcttcca	gactaatgaa	tgtgttcagc	atggaaacta	tcaattttgt	tagctgcctt	60
atcctcatgg	gctttccctc	aagcccagaa	atgcagctcc	tctacttcgg	tctcttctca	120
gtagcctata	ctctcaccoc	gatgggaaat	gcagccattg	tctgtgctgt	gtggtaggac	180
cagcaccttc	acactcccat	gtacaccctc	ttgggaaatt	tctctctcct	ggaaatatgt	240
tatgttactg	caactaaact	gctggccaac	ttcctctcca	caagcaagtc	catctcatte	300
atgagttgtt	ttgcacagtt	ctacttcttc	tctttggggg	atgatgaggg	cttcttcctt	360
tgcatacagg	cctttgacag	gtatcttgcc	atctgccgcc	ctctacgtta	tccatgcata	420
atgactaaac	aagtatgcac	tggcctcatc	atcttttgc	ggatcatgtgt	ctttgtaatc	480
ttcctaacte	tggtgattct	catttcacag	ctatcctact	gtggcccaaa	tattatcaac	540
cattttatatt	tgatcccg	ccatttgaag	atgctgtcct	gttctgaaga	catcatcatc	600
accagctca	tttactccac	attcaattct	gtcttcataa	ttggcacctt	tctctttatc	660
ctttgttctt	atgctctggg	gattctgggt	ataatacggg	tgcttccaga	ggctggcaaa	720
cgaaaagctt	tctccacttg	tgctctctcat	ttggcagttg	tcaccttatt	ttatggctct	780
atcatggtga	tgtatgttag	tcctggatca	gcacaccag	taaaaatgaa	aaaatcatta	840
ccttgttctt	ttctgtgata	acaccactct	gtaatcctct	aatatatagt	ctcaggaaca	900
aagagatgaa	agattatctg	aggaaaatct	tcaggactgg	aaaagatggt	aataaaata	959

<210> 410
 <211> 926
 <212> DNA
 <213> Unknown (H38g259 nucleotide)

<220>
 <223> Synthetic construct

<400> 410

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ctgcagcctt	ttctcttctg	tggttttctt	accatctact	tcatacagtg	ggctgggaat	120
ggagccattc	tgatgattgt	catctctgat	cctagactcc	attcccctat	gtatttcttc	180
ctgggaaacc	tgctctgcct	ggacatctgc	tactccagcg	taacactgcc	aaaaatgctg	240
cagaaacttc	tctctgcaca	caaagcaatt	tctttcttgg	gatgcataag	ccaactccat	300
ttcttccact	tcctgggcag	cacagaggcc	atgttggttg	ccgtgatggc	atttgaccgc	360
tttgtggcta	tttgcaagcc	acttcgctac	actgtcatta	tgaacctca	gctctgtacc	420
cagatggcca	tcacaatctg	gatgattggg	tttttccatg	ccctgctgca	ctccctaattg	480
acctctcgct	tgaacttctg	tggttctaac	cgtatctatc	acttcttctg	tgatgtgaag	540
ccattgctaa	agctgagctt	aatcagtgcc	tgctcagtac	tgtcacaggg	acaatcgcca	600
tgggccctt	ctttctcaca	ttactctcct	atttctacat	tatcacccat	ctcttcttca	660
agactcattc	ttttagcatg	ctccgcaaag	cactgtccac	ttgtgcctcc	cacttcatgg	720
tagttattct	tttgtatgca	cctgttctct	tcacctatat	tcatacatgcc	tcagggaact	780
ccatggacca	ggaccggatc	actgccatca	tgtatactgt	ggctactcca	gtactaaacc	840
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ggtggctttg	gcctaaagaa	atcttg				926

<210> 411
 <211> 994
 <212> DNA
 <213> Unknown (H38g260 nucleotide)

<220>
 <223> Synthetic construct

<400> 411

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cgagatattt	agtccttgg	ctttgtgcta	gttttaatat	tctacttctt	catcctccct	120
ggaaattttc	tcattatttt	caccataagg	tcagaccctg	ggctcacagc	ccccctctat	180
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gaccgctaca	tcaccatctg	cctgcctctg	cagtattcaa	ctgtcatgaa	ctctagagcc	420
tgctatgcaa	tgatgttggc	tctgtggctt	gggggttttg	tccactccat	tatccagggtg	480
gtcctcatca	tccgcttgcc	ttttgtggc	ccaaaccagc	tggacaactt	cttctgtgat	540
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accacccata	tcattgttat	attcttcatg	tttgaccctg	gcattctcat	ctacacgtgc	780
cccttcagg	ctttcccagc	cgacaagggtg	gtttctctct	tccacacagt	gattcttctt	840
ttgttgaatc	ctgtcattta	tacccttcat	aaccaggaag	tgaaagcttc	catgaaaaag	900
gtgtttaata	aacacatagc	ctgaaaaagg	gcaaaaaaaa	aaagaagaaa	aatagactgt	960
agaattttat	ctgaaattga	tttgtttatt	tcca			994

<210> 412

<211> 945

<212> DNA

<213> Unknown (H38g261 nucleotide)

<220>

<223> Synthetic construct

<400> 412

atggaaattg	tctccacagg	aaacgaaact	attactgaat	ttgtcctcct	tggcttctat	60
gacatccctg	aactgcattt	cttgtttttt	attgtattca	ctgctgtcta	tgtcttcate	120
atcatagggg	atatgctgat	tattgtagca	gtggtagct	cccagaggct	ccacaaaccc	180
atgtatat	tcttgcgaa	tctgtccttc	ctggatat	tctacacctc	cgcagtgatg	240
ccaaaaatgc	tggagggtt	cctgcaagaa	gcaactatct	ctgtggctgg	ttgcttgctc	300
cagttcttta	tcttcggctc	tctagccaca	gctgaatgct	tactgtggc	tgtcatggca	360
tatgaccgct	acctggcaat	ttgctaccca	ctccactacc	cactcctgat	ggggcccaga	420
cgttacatgg	ggctgggtg	cacaacctgg	ctctctggat	ttgtggtaga	tggactggtt	480
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gactttatgc	ttttcgtgg	cctggcttgc	tccgatacca	gagtggtca	ggtgacaact	600
ctcattctgt	ctgtgttctg	cctcactatt	ccttttggtg	tgattctgac	atcttatgcc	660
agaattgtgg	tggcagtgct	gagagtctct	gctggggcaa	gcaggagaag	ggctttctcc	720
acatgctcct	cccacctagc	tgtagtgacc	acattctatg	gaacgctcat	gatcttttat	780
gttgaccctt	ctgtgtcca	ttcccagctc	ctctccaagg	tcttctccct	gctctacact	840
gtggtcaccc	ctctcttcaa	tctgtgatc	tataccatga	ggaacaagga	ggtgcatcag	900
gcacttcgga	agattctctg	tatcaaacaa	actgaaacac	ttgat		945

<210> 413

<211> 936

<212> DNA

<213> Unknown (H38g262 nucleotide)

<220>

<223> Synthetic construct

<400> 413

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gacctccagg	gcttgcctt	ctctgtcttt	ctcactatct	acctgctgac	cgtggcaggc	120
aatttctca	ttgtgggtg	ggtctccact	gatgctgccc	tccagtcccc	tatgtacttc	180
ttcctgcga	ccctctcggc	cttggagatt	ggctatacgt	ctgtcacagg	ccccctgcta	240
cttcaccacc	tccttactgg	cggcgccac	atctctcgtc	ctggatgtgc	tctccagatg	300
ttcttcttcc	tttcttttgg	cgcacggag	tgctgcctcc	tggcagccat	ggcctatgac	360
cgtatgcag	ccatctgtga	acccctccgc	taccactg	tgtgagcca	ccgggtgtgt	420
ctacagctag	ctgggtcggc	gtgggcctgt	gggtgctgg	tgggtgctgg	ccacacccct	480

ttcatcttct	ctttgccctt	ctgcggcccc	aataccatcc	cgcagttctt	ctgtgagatc	540
cagcctgtcc	tgcagctggg	atgtggagac	acctcgctta	atgaactgca	gattatcctg	600
gcaacagccc	tcttcatect	ctgccccctt	ggcctcatcc	tgggctccta	cgggcgtatc	660
ctcgttacca	tcttcgggat	cccatctgtt	gcggggccgc	gcaaggcctt	ctccacctgc	720
tctccccc	tgatcggtgg	ctccctcttc	tatggcaccg	cactctttat	ctatatctgc	780
cctaaggcca	gctacgatcc	ggccactgac	cctctggtgt	ccctcttcta	tgctgtggtc	840
acccccatcc	tcaaccccat	catctacagc	ctgcggaaca	cagaggtcaa	agctgcccta	900
aagagaacca	tccagaaaac	ggtgcctatg	gagatt			936

<210> 414

<211> 948

<212> DNA

<213> Unknown (H38g263 nucleotide)

<220>

<223> Synthetic construct

<400> 414

atggttaacc	aaagctcccc	catgggcttc	ctccttctgg	gcttctctga	acaccagca	60
ctggaaagga	ctctctttgt	ggttgtcttc	acttctacc	tcttgacct	ggtgggcaac	120
acactcatca	tctgtctgtc	tgtactgtac	cccaggctcc	actctccaat	gtactttttc	180
ctctctgacc	tctccttctt	ggacctctgc	tttaccacaa	gttgtgtccc	ccagatgctg	240
gtcaacctct	ggggcccaaa	gaagaccatc	agcttccctg	gatgctctgt	ccagctcttc	300
atcttctctg	ccctggggac	cactgagtgc	atcctctga	cagtgatggc	ctttgaccga	360
tacgtggctg	tctgccagcc	cctccactat	gccaccatca	tccacccccg	cctgtgctgg	420
cagctggcat	ctgtggcctg	ggttatgagt	ctggttcaat	cgatagtcca	gacaccatcc	480
acctccact	tgcccttctg	tccccaccag	cagatagatg	actttttatg	tgagggtcca	540
tctctgatcc	gactctctctg	tggagatacc	tcctacaatg	aaatccagtt	ggctgtgtcc	600
agtgtcatct	tctgtggtgt	gcctctcagc	ctcatccttg	cctcttatgg	agccactgcc	660
caggcagtg	tgaggattaa	ctctgccaca	gcatggagaa	aggccttttg	gacctgtccc	720
tcccatctca	ctgtggtcac	cctcttctac	agctcagtea	ttgtgtgcta	cctccagccc	780
aaaaatccgt	atgcccgaag	gaggggcaag	ttctttggtc	tcttctatgc	agtgggcact	840
ccttcactta	acctctctgt	atacaccctg	aggaacaagg	agataaagcg	agcactcagg	900
aggttactag	ggaaggaaag	agactccagg	gaaagctgga	gagctgct		948

<210> 415

<211> 954

<212> DNA

<213> Unknown (H38g264 nucleotide)

<220>

<223> Synthetic construct

<400> 415

atgaagagcg	aactgaacag	gaattactca	gaggtgacag	agtttattct	gctgggattc	60
agaacatcgc	cagaagcaca	gattctctta	ttcttctgt	tcttgcttat	ctacatggtc	120
attgtgttga	gaaatctcag	catgttagtt	gtcattgaaa	tagactccag	acttcacaca	180
cctgtgtatt	tctttctcag	aaatttgtcc	tatttggtac	tccgctactc	cacagttatt	240
gcttcaaaa	ctgactactt	tattttccaa	ggaaaagaaa	atttcttaca	atgggtgagc	300
aacacagttg	tttttctttg	ctctctttgt	tgggactgaa	ggtttttttc	tggatatgat	360
ggcatatgat	cgcttctcag	ctatttgttc	acctttcttc	tatactgtat	gtatgtctca	420
gcaagcttgt	gtttgtttgg	tggttggtc	ctctatctgt	ggatgcatca	actccatgat	480
acaaacaggt	tttaccttca	gtttgcattt	ctgtggagaa	aacagattag	agcacttttt	540
ctgtgatgtc	tcagtcatga	tcaagatctc	atgtattgac	atccttgtga	atgaggtagt	600
actgtttatt	ctctctgtct	tcataccac	caccacaact	gtcattctgg	cttctatgt	660
gcatacctc	tccactgtcc	tgaagattct	ctcaaccac	ggcagaagga	agactttctc	720
cacttgacgc	tctcacatca	ctgtgggtgag	tttattctat	ggaactgtat	tcttcatgta	780
tgcccaacct	ggggccatct	ccaaagagca	aggttatagt	tgtattctaa	actcttgta	840
tccctatgtt	aaatatctga	tttatagtct	aagaaatagg	tgcaaaatgc	tttgaaaagg	900
acattgataa	gaaaaatatc	ttttcattgg	cctctagcca	tctataaaac	tata	954

<210> 416
 <211> 531
 <212> DNA
 <213> Unknown (H38g265 nucleotide)

<220>
 <223> Synthetic construct

<400> 416
 atgagcccaa gaatgtgcct ttcatttctg gctgttgcct ggacccttgg tgtcagtcac 60
 tccctgttcc aactggcatt tcttgtaaat ttacccttct gtggccctaa tgtgttggac 120
 agcttctact gtgaccttcc tcggcttctc agactagcct gtaccgacac ctacagattg 180
 cagttcatgg tcaactgttaa cagtgggttt atctgtgtgg gtactttctt catacttcta 240
 atctcctaca tcttcatcct gtttactgtt tggaaacatt cctcaggtgg ttcattccaag 300
 gccctttcca ctctttcagc tcacagcaca gcggtccttt tgttctttgg tccacccatg 360
 tttgtgtata catggccaca ccctaattca cagatggaca agtttctggc tatttttggat 420
 gcagttctca ctcttttct gaatccagtt gtctatacat tcaggaataa ggagatgaag 480
 gcagcaataa agagagtatg caaacagcta gtgatttaca agaagatctc a 531

<210> 417
 <211> 965
 <212> DNA
 <213> Unknown (H38g266 nucleotide)

<220>
 <223> Synthetic construct

<400> 417
 atggaagcag aaaaccttac agaattatca aaatttctcc tectgggact ctcagatgat 60
 cctgaactgc agcccgctct ctttgggctg ttccctgtcca tgtacctggg caccggtgctg 120
 gggaacctgc tcatcattct ggccgtcagc tctgactccc acctccacac ccccatgtac 180
 ttcttctctt ccaacctgtc ctttgttgac atctgtttca tctccaccac agtccccaag 240
 atgctagtga gcatccaggc acggagcaaa gacatctcct acatgggggtg cctcactcag 300
 gtgtattttt taatgatgtt tgctggaatg gatactttcc tactggccgt gatggcctat 360
 gaccggtttg tggccatctg ccacccactg cactacacgg tcatcatgaa cccctgcctc 420
 tgtggcctcc tggttctggc atcttgggtc atcattttct ggttctccct ggttcatatt 480
 ctactgatga agaggttgac cttctccaca ggcactgaga ttccgcattt cttctgtgaa 540
 cgggtcagg tctcaagggt ggctgtctct aacaccctcc tcaataacat tgtcttgtat 600
 gtggccacgg cactgctggg tgtgtttcct gtagctggga tctcttctc ctactctcag 660
 attgtctcct ccttaatggg aatgtcctcc accaagggca agtacaaagc cttttccacc 720
 tgtggatctc acctctgtgt ggtctccttg ttctatggaa caggacttgg ggtctatctg 780
 agttctgctg tgaccattc ttcccagagc agctccaccg cctcagtgat gtacgccatg 840
 gtcaccccca tgctgaaccc cttcatctac agcctgagga acaaggatgt gaagggggcc 900
 ctggaaagac tctcagcag ggccgactct tgtccatgac aaatcagggc ctcagaacta 960
 agagg 965

<210> 418
 <211> 967
 <212> DNA
 <213> Unknown (H38g267 nucleotide)

<220>
 <223> Synthetic construct

<400> 418
 tacacagagc cagagaatct cacagggtgc ttagaattcc tgctcctggg actcccagat 60
 gatccagaac tgcagcccggt cctcttttggg ctgttctctg ccatgtacct ggtcatgggtg 120
 ctggggaacc tgctcatcat tctggccgtc agctctgact cccatctcca cagcccatg 180
 tacttcttcc tctccaacct gtccttggct gacatcggtt ttgcctctac tactgtcccc 240
 aagatgattg tggacatcca ggctcatagt agactcatct cttacgtggg ctgcctgact 300
 cagatgtctt ttttgcattt tttcgcattg atggaaagtc tgctcctgat tgtgatggcc 360

tatgaccggt	tcgtggccat	ctgtcacccc	ctgcactacc	aagtcacat	gagcccacga	420
ctctgtggct	tcttagtttt	ggtgtctttt	ttcttagcc	tttggactc	tcagctgcac	480
aatttgattg	tgttacaact	tacctgttc	aacgatgtgg	aaatctctaa	ttttttctg	540
tgaccttct	taacttctca	agctggcctg	ttctgacacc	tccattaata	acatggttgt	600
atattttatt	ggtgccatat	ttggttttct	ccctctctta	gggaccttt	tctcttacta	660
taaaattggt	tctccattc	tgagagttct	ctcttcaggt	gggaagtata	aagccttctc	720
cacctgcagc	tctcacctgt	cagttgtttg	cttactttat	ggaacagccc	ttggagggtg	780
cctcagttca	gctgtgtccc	tttctccag	gaagggtgca	gtggcctcag	taatgtacat	840
ggtggtcacc	cccatgctga	accccttcac	ctacagcctg	agaaacaggg	acattcaaag	900
tgccctgcag	aggctgcacg	gcagaataat	gtaatctcct	tatctgttgc	atcttttttg	960
tagtatt						967

<210> 419

<211> 924

<212> DNA

<213> Unknown (H38g268 nucleotide)

<220>

<223> Synthetic construct

<400> 419

atgagacaga	taaatcagac	acaagtgaca	gaattcctcc	ttctgggact	ctctgatggg	60
ccacacaccg	agcagctgct	atttatcgta	ttattgggtg	tctacctggt	cactgtgctt	120
ggaaatctgc	ttctaatttc	ccttggtcat	gttgactccc	aacttcacac	acccatgtat	180
ttttttctct	gcaacttgct	tctggctgac	ctctgtttct	ctaccaacat	agttcctcag	240
gcactagtcc	acctgctttc	cagaaagaag	gtcattgcat	tcacactttg	cgcagctcga	300
cttctctttt	tctcattttt	tgggtgtacc	cagtgcgccc	ttcttgcagt	gatgtcctat	360
gatcgctatg	ttgcaatctg	caatcctctg	cgttaccctg	acatcatgac	ctggaaagtg	420
tgtgtccagc	tggcaacagg	atcatggacc	agtggcattc	tgggtgtctgt	ggtagacacc	480
accttcacac	tgaggctacc	ctaccgaggc	agtaacagca	ttgctcattt	cttttgtgag	540
gcccctgcac	tattgatctt	agcatccaca	gacacccatg	catcagagat	ggccattttt	600
cttacggggg	ttgtgattct	cctcatacct	gtttttctga	ttctgggtatc	ctatggccgt	660
atcatagtaa	ctgtgggtcaa	gatgaagtca	actgtgggga	gtctcaaggc	attttctacc	720
tgtggctccc	acctcatggt	ggtcatactt	ttttatggat	cagcaattat	cacttacatg	780
acacccaagt	cttccaaaca	gcaggaaaaa	tgggtgtctg	ttttctatgc	aatagtgact	840
cccatgctga	atccctcat	ctatagcctg	agaaacaagg	atgtgaaggc	agctctgagg	900
aaagtagcca	caaggaattt	ccca				924

<210> 420

<211> 954

<212> DNA

<213> Unknown (H38g269 nucleotide)

<220>

<223> Synthetic construct

<400> 420

atgcccatac	ttatggctat	aggaaactgg	acagaaataa	gtgaatttat	cctcatgagc	60
ttctcttccc	tacctactga	aatacagtca	ttgtcttcc	tgacatttct	aactatctat	120
ttggttactc	tgaaggga	cagcctcatc	attctgggta	ccctagctga	ccccatgcta	180
cacagcccca	tgtacttctt	cctcagaaac	ttatctttcc	tggagattgg	cttcaaccta	240
gtcatttgtc	ccaaaatgct	ggggaccctg	cttggccagg	acacaacat	ctccttctt	300
ggctgtgcca	ctcagatgta	ttcttctctt	ttctttgggg	tagctgaatg	cttctctctg	360
gctaccatgg	catatgaccg	ctatgtggcc	atctgcagtc	ccttgcacta	cccagtcac	420
atgaaccaa	ggacacgggc	caaactggct	gctgtcttct	ggttcccagg	ctttcctgta	480
gctactgtgc	agaccacatg	gctcttcagt	tttccattct	gtggcaccaa	caagggtgaac	540
cacttcttct	gtgacagccc	gcctgtgctg	aagctgggtct	gtgcagacac	agcactgttt	600
gagatctacg	ccatcgtcgg	aaccattctg	gtgggtcatga	tcccctgctt	gctgatcttg	660
tgttcttata	ctcgatttgc	tgtgtctatc	ctcaagatcc	catcagctaa	agggaagcat	720
aaagccttct	ctcagtgctc	ctcacacctc	cttgtgtctt	ctcttttcta	tatatcttct	780
agcctcacct	acttctggcc	taaatcaaat	aattctcctg	agagcaagaa	gttggttatca	840

ttatcctaca ctgttgtgac tcccatgttg aacccccatta tctacagctt gagaaatagc 900
gagggtgaaga atgccctcag caggaccttc cacaagggtcc tagccctcag aaac 954

<210> 421

<211> 780

<212> DNA

<213> Unknown (H38g270 nucleotide)

<220>

<223> Synthetic construct

<400> 421

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aaccttaatg	gatgtgacaa	gaccatcagc	tacatgggct	gtgccatcca	gctcttctctg	120
ttcctgggtc	tgggtgggtg	ggagtgcctg	cttctggctg	tcattggccta	tgaccgggtgt	180
gtggctatct	gcaagccct	gcactacatg	gtgatcatga	accccaggct	ctgccggggc	240
ttgggtgtcag	tgacctggag	ctgtgggggtg	gccaactcct	tgcccatgtc	tcctgtgacc	300
ctgcgcttac	cccgtgtgtg	gcaccacgag	gtggaccact	tcctgcgtga	gatgcccgcc	360
ctgatccgga	tggcctgcgt	cagcactgtg	gccatcgaag	gcaccgtctt	tgctcctggcg	420
gtgggtgttg	tgctgtcccc	cttgggtgtt	atcctgctct	cttacagcta	cattgtgagg	480
gctgtgttac	aaattcggtc	agcatcagga	aggcagaagg	ccttcggcac	ctgcggctcc	540
catctcactg	tggctctcct	tttctatgga	aacatcatct	acatgtacat	gcagccagga	600
gccagttctt	cccaggacca	gggcattgtc	ctcatgctct	tctacaacat	tgctaccccc	660
ctcctcaatc	ctctcatcta	caccctcaga	aacagagagg	tgaagggggc	actgggaagg	720
ttgcttcttg	ggaagagaga	gctaggaaag	gagtaaaggc	atctccacct	gacttcactt	780

<210> 422

<211> 985

<212> DNA

<213> Unknown (H38g271 nucleotide)

<220>

<223> Synthetic construct

<400> 422

gaagagatat	tatgaataat	atcccagcat	gtacacacag	ggtgtgtaca	gattaagaac	60
tgcagcccat	cctctttggg	ctgttcctgt	ccatgtgcct	ggcatgggtg	ctggggaacc	120
ttctcatcat	cctggccgtc	agctctgact	cccacctcca	cacccccacg	tactttttcc	180
tctccaacct	gtccttgggt	gacatcggtt	tcccctccac	cactgtcccc	aagatgattg	240
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tttttctgtg	ttttggatgc	atggaagaca	tgcttctgag	tgtgatggct	tatgaccggt	360
ttgtggccat	ctgtcaccct	ctggattatc	cagtcattcat	gaacccatgt	ttctgtggct	420
tcttggtttt	gttgtctttt	ttttctcagt	cttttagact	tccagctgca	caattggatt	480
gccttacaaa	ttacctgctt	caaggatgtg	gaaattccca	gtttcttctg	tgacccttct	540
caactccccc	accttgcttg	ttgtgacacc	ttcaccaaca	acatagtcac	gtatttcctt	600
gctgccatcc	ttgggtttct	tcccatctcg	gggatctttt	ctcttactat	aaaattggtt	660
cctccattct	gaaggtttca	tcatcagggt	ggaagtataa	agccttctcc	acctgtggct	720
ctcacctgtc	agttgtttgc	ttattttatg	gaacagccct	tggagggtac	ctcagttcag	780
acatgtcttc	ttatcccaga	aagggtgcag	tggcttcagt	gatgtacaca	gtggctcgccc	840
ccatgctgaa	cccgttcate	tacagcctga	gaaaaaggga	cattaaaagt	gccctgcagc	900
agctgcatgg	cagaatagtc	taatctcatg	atcttattat	cggttccatt	ctttagcatg	960
ggttggaaaa	ggcagcaagg	tcaaa				985

<210> 423

<211> 963

<212> DNA

<213> Unknown (H38g272 nucleotide)

<220>

<223> Synthetic construct

<400> 423

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ggctctggaac	aatttcattt	gtggctctca	ctccctgtgt	gtggcttagg	cacagccaca	120
attgtgggca	atataactat	tctggttggt	gttgccactg	aaccagtctt	gcacaagcct	180
gtgtaccttt	ttctgtgcat	gctctcaacc	atcgacttgg	ctgcctctgt	ctccacagtt	240
cccaagctac	tggctatctt	ctgggtgtgga	gccggacata	tatctgcctc	tgcttgcttg	300
gcacagatgt	tcttcattca	tgcttctctg	atgatggagt	ccactgtgct	actggccatg	360
gcctttgatc	gctacgtggc	catctgccac	ccactccgct	atgccacaat	cctcactgac	420
accatcattg	cccatatagg	ggtggcagct	gtagtgcgag	gctccctgct	catgctccca	480
tgtcccttcc	ttattgggag	tttgaacttc	tgccaaagcc	atgtgatcct	acacacgtac	540
tgtgagcaca	tggctgtggt	gaagctggcc	tgtggagaca	ccaggcctaa	ccgtgtgtat	600
gggctgacag	ctgcactggt	ggtcattggg	gttgacttgt	tttgcatagg	tctctcctat	660
ggcctaagtg	cacaagctgt	ccttcgcctc	tcateccatg	aagctcgggc	caaggcccta	720
gggacctgtg	gttcccatgt	ctgtgtcatc	ctcatctctt	atacaccagc	cctcttctcc	780
ttttttacac	accgctttgg	ccatcacgtt	ccagtccata	ttcacattct	tttggccaat	840
gtttatctgc	ttttgccacc	tgctcttaat	cctgtggtat	atggagttaa	gaccaaacag	900
atccgtaaaa	gagttgtcag	ggtgtttcaa	agtgggcagg	gaatgggcat	caaggcatct	960
gag						963

<210> 424

<211> 982

<212> DNA

<213> Unknown (H38g273 nucleotide)

<220>

<223> Synthetic construct

<400> 424

atgacatgga	gtggcggaac	catagtggga	gagtgagtga	gtttgtgttg	ctggggcttc	60
cctgtcctcg	cgccactaca	ggtactattg	tttgcccttt	tgctgtctgg	ctatgtgttg	120
gtgctgactg	agaacacact	catcattatg	gcaattagga	accattccac	cctccacaaa	180
cccattgact	tttttctagc	taatatgtcc	tttctggaga	tctggtatgt	cactgtcact	240
attcccaaga	tgcttgctgg	ctttgttgga	tccaaacagg	atcatggaca	gctaattctc	300
tttgagggat	gcatgacaca	gctctacttt	ttccttggct	tgggctgcac	tgagtgtgtc	360
cttctcgctg	ttatggccta	tgatcgctat	atggccatct	gctatcctct	ccactaccca	420
gtcattgtca	gtggccggct	gtgtgtgcag	atggctgctg	gctcttgggc	tggagggttt	480
ggcatctcca	tgggtcaaat	ttttcttatt	tctggcctct	cttactgtgg	ccccaacatc	540
atcaaccact	ttttctgtga	tgtctctcca	ttgtctaac	tctcatgcac	tgatatgtcc	600
acagcagagc	ttacagattt	catcctggcc	atttttatcc	ttctagggcc	actctctgtc	660
actggggcct	cctatgtggc	cattactggt	gctgtgatgc	acataccttc	ggctgctgga	720
cgctataagg	ccttttccac	ctgtgcctct	catctcactg	ttgtgataat	cttctatgca	780
gccagtatct	tcatctatgc	tgggccaag	gcactctcag	cttttgacac	caacaagttg	840
gtctctgtac	tgtatgctgt	cattgtacca	ttgtctaatc	ccatcattta	ctgcctgcgc	900
aatcaagagg	tcaagagagc	cctatgctgt	actctgcacc	ctgtaccagc	accaggatcc	960
tgaccccaag	aaagctagca	ga				982

<210> 425

<211> 936

<212> DNA

<213> Unknown (H38g274 nucleotide)

<220>

<223> Synthetic construct

<400> 425

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ccagaactac	agccgttcat	atgtgggctg	ttcctgtcca	tgtacctggt	gacgggtgctg	120
ggaaacctgc	tcatcatcct	ggccatcagc	tctgactccc	acctccacac	ccccatgtac	180
ttcttctctc	ccaacctgtc	ctgggttgac	atctgtttca	gcacttgcat	cgtccccaag	240
atgctggtga	acatccagac	cgagaacaaa	gcatctcctc	acatggactg	cctcacacag	300
gtctatttct	ccatgttttt	tcctattctg	gacacgctac	tcctgaccgt	gatggcctat	360

gaccgggtttg	tggctgtctg	ccaccctctg	cactatatga	tcacatgaa	ccccacctc	420
tgtggcctcc	tggtttttgt	cacctggctc	attgggtgtca	tgacatccct	cctccatatt	480
tctctgatga	tgcatcta	cttctgtaaa	gattttgaaa	ttccacattt	tttctgcgaa	540
ctgacgtaca	tcctccagct	ggcctgctct	gataccttcc	tgaacagcac	gttgatatac	600
tttatgacgg	gtgtgctggg	cgtttttccc	ctccttggga	tcattttctc	ttattcacga	660
attgcttcat	ccataaggaa	gatgtcctca	tctgggggaa	aacaaaaagc	actttccacc	720
tgtgggtctc	acctctccgt	cgtttcttta	ttttatggga	caggcattgg	gggccacttc	780
acttctgcgg	tgactcactc	ttcccagaaa	atctccgtgg	cctcggtgat	gtacactgtg	840
gtcaccccca	tgttgaaccc	cttcatctac	agcctgagga	acaaggatgt	gaaggagacc	900
ctggggagtc	tcctcagcag	ggcagcctct	tgtttg			936

<210> 426

<211> 960

<212> DNA

<213> Unknown (H38g275 nucleotide)

<220>

<223> Synthetic construct

<400> 426

atgactgctt	gcaatgcctc	acaggggccac	ccttctttct	tcattctcca	aggaattcct	60
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gtgcttggga	actgcacat	cctcctcacc	atctccacag	agcgctccct	gcacaaaccc	180
atgttctctg	tcctctgtct	gttggccctc	acagacctgg	gcatgtctac	aaccaccatt	240
cccaagggtgc	tgtgcatttt	ctggtttggc	cagagtgaga	tcagctatga	aggatgcctg	300
gttcagctgt	tcttcatcca	ctccatctct	gccatgcagt	cagctgtcct	gatgaccatg	360
gcctttgacc	actatgtggc	catctgcaag	cccttgcgct	atgccacat	cctttccaat	420
agttgcactg	gactcattgg	cttagtgagt	ttggtgagag	ctatcctctt	tattctcccc	480
atgccccatcc	tccttcagca	aatgcctat	catgccaatc	gtgtcatccc	caccacctcc	540
tgtgagcaca	ctgtgtggt	gaagatggtt	tgtgtagata	ctacagtcaa	caggatatat	600
ggcctgggtg	tggccttgtt	ggttgcctgg	tagatctctc	agctattgct	tcactctatg	660
tgctaatacat	ccaggctata	atgcactctc	cttctaagga	agccccaccac	aaagcagtca	720
acacctgcac	cacacacatc	tgtgtcatgc	ttatttctta	tactccctca	cttttctctt	780
ttctcgctca	ccgctttggc	caaggcattc	caccccatgt	ccacatcatt	cttggcaacc	840
tttacttctt	tgtacctcca	atgctcagtc	ctataattta	tggagtgaag	actaaggagt	900
tctgggacaa	agtgaacaaa	tagggttgct	ggaaagaaga	accacacaacc	actgaccatg	960

<210> 427

<211> 948

<212> DNA

<213> Unknown (H38g276 nucleotide)

<220>

<223> Synthetic construct

<400> 427

atggagctct	ggaacttcac	cttgggaagt	ggcttcattt	tgggtggggat	tctgaatgac	60
agtgggtctc	ctgaactgct	ctgtgctaca	attacaatcc	tatacttggt	ggccctgac	120
agcaatggcc	tactgtcct	ggctatcacc	atgggaagccc	ggctccacat	gcccattgtac	180
ctcctgcttg	ggcagctctc	tctcatggac	ctcctgttca	catctgttgt	cactcccaag	240
gcccttgcgg	actttctgcy	cagagaaaac	accatctcct	ttggaggctg	tgcccttcag	300
atgttctctg	cactgacaat	gggtgggtgct	gaggacctcc	tactggcctt	catggcctat	360
gacaggtatg	tggccatttg	tcacccctct	acatacatga	ccctcatgag	ctcaagagcc	420
tgctggctca	tgggtggccac	gtcctggatc	ctggcatccc	taagtgcctt	aatatatacc	480
gtgtatacca	tgcactatcc	cttctgcagg	gcccaggaga	tcaggcatct	tctctgtgag	540
atcccacact	tgtcgaaggt	ggcctgtgct	gatacctcca	gatatgagct	catgggtatat	600
gtgatgggtg	tgaccttctt	gattccctct	cttgcctgta	tactggcctc	ctatacacaa	660
attctactca	ctgtgctcca	tatgccatca	aatgagggga	ggaagaaagc	ccttgtcacc	720
tgctcttccc	acctgactgt	ggttgggagt	ttctatggag	ctgccacatt	catgtatgtc	780
ttgcccagtt	ccttccacag	caccagacaa	gacaacatca	tctctgtttt	ctacacaatt	840
gtcactccag	ccctgaatcc	actcatctac	agcctgagga	ataaggaggt	catgcgggcc	900

ttgaggaggg tcctgggaaa atacatgctg ccagcacact ccacgctc

948

<210> 428

<211> 936

<212> DNA

<213> Unknown (H38g277 nucleotide)

<220>

<223> Synthetic construct

<400> 428

atgaaagcag	gaaacttctc	agacactcca	gaattctttc	tcttgggatt	gtcaggggat	60
ccggagctgc	agcccatcct	cttcattgctg	ttcctgtcca	tgtacctggc	cacaatgctg	120
gggaacctgc	tcattcatcct	ggccgtcaac	tctgactccc	acctccacac	ccccatgtac	180
ttcctcctct	ctatcctgtc	cttggctcgac	atctgtttca	cctccaccac	gatgcccagg	240
atgctggtga	acatccaggc	acaggctcaa	tccatcaatt	acacaggctg	cctcacccaa	300
atctgctttg	tcctgggtttt	tggtggattg	gaaaatggaa	ttctgggtcat	gatggcctat	360
gategatttg	tggccatctg	tcacccactg	aggtacaatg	tcattcatgaa	ccccaaactc	420
tggtgggtgc	tgcttctgct	gtccttcctc	gttagtgctc	tggatgctct	gctgcacacg	480
ttgatgggtg	tacagctgac	cttctgcata	gacctggaaa	ttccccactt	tttctgtgaa	540
ctagctcata	ttctcaagct	cgctgtttct	gatgtcctca	tcaataacat	cctgggtgat	600
ttggtgacca	gcctgttagg	tggtgttctc	ctctctggga	tcattttctc	ttacacacga	660
attgtctcct	ctgtcatgaa	aattccatca	gctgggtggaa	agtataaagc	tttttccatc	720
tgccgggtcac	atttaatcgt	cgtttctctg	ttttatggaa	cagggttttg	ggtgtacctt	780
agttctgggg	ctacccactc	ctccaggaag	ggtgcaatag	catcagtgat	gtataccgtg	840
gtcaccccca	tgctgaacct	actcatttac	agcctgagaa	acaaggacat	gttgaaggct	900
ttgaggaaac	taatattctag	gataccatct	ttccat			936

<210> 429

<211> 984

<212> DNA

<213> Unknown (H38g278 nucleotide)

<220>

<223> Synthetic construct

<400> 429

aaaatctcca	atagctccaa	attccaggtc	tctgagttca	tcctgctggg	attccccggc	60
attcacagct	ggcaacactg	gctatctctg	cccctggcac	tactgtatct	ctcagcactt	120
gctgcaaaca	ccctcatcct	catcatcatc	tggcagaacc	cttctttaca	gcagcccatg	180
tatattttcc	ttggcatcct	ctgtatggta	gacatgggtc	tggccactac	tatcatcctt	240
aagatcctgg	ccatcttctg	gtttgatgcc	aagggtatta	gcctccctga	gtgctttgct	300
cagatttatg	ccattcactt	ctttgtgggc	atggagtctg	gtatcctact	ctgcatggct	360
tttgatagat	atgtggctat	ttgtcacctt	cttcgctatc	catcaattgt	caccagttcc	420
ttaatcttaa	aagctaccct	gttcattggtg	ctgagaaatg	gcttatttgt	cactccagtg	480
cctgtgcttg	cagcacagcg	tgattattgc	tccaagaatg	aaattgaaca	ctgcctgtgc	540
tctaaccctg	gggtcacaag	cctggcttgt	gatgacagga	ggccaaacag	catttgccag	600
ttggttcttg	catggcttgg	aatggggagt	gatctaagtc	ttattatact	gtcatatatt	660
ttgattctgt	actctgtact	tagactgaac	tcagctgaag	ctgcagccaa	ggccctgagc	720
acttgtagtt	cacatctcac	cctcatcctt	ttctttttaca	ctattgttgt	agtgatttca	780
gtgactcate	tgacagagat	gaaggctact	ttgattccag	ttctacttaa	tgtgttgcac	840
aacatcatcc	ccccttccct	caaccctaca	gtttatgcac	ttcagaccaa	agaacttagg	900
gcagccttcc	aaaagggtgct	gtttgccctt	acaaaagaaa	taagatctta	gagaccttct	960
ccatgatgta	catgaacctc	agct				984

<210> 430

<211> 947

<212> DNA

<213> Unknown (H38g279 nucleotide)

<220>

<223> Synthetic construct

<400> 430

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agtgggtctc	ctgaactgct	ctatgctaca	tttacaatcc	tatacatggt	ggcactgacc	120
agcaatggtc	tgctgctcct	ggccatcacc	atagaagccc	ggctccacat	gcccattgtac	180
ctcctgcttg	ggcagctctc	tctcatggac	ctcctgttca	catctgttgt	cactcccaag	240
gccttgcgga	ctttctgcgc	agagaaaaca	ctatctcctt	tggaggctgt	gcacttcaga	300
tgttcttggc	actgacaatg	ggtagcgctg	aggacctcct	actggccttc	atggcctatg	360
acaggtagtg	ggccatttgt	catcctctga	aatacatgac	cctcatgagc	ccaagagtct	420
gctggatcat	ggtggccaca	tcttgatcc	tggcatccct	gattgctata	ggacatacca	480
tgtacactat	gcacctccct	ttctgtgtgt	cctgggaaat	caggcatctg	ctctgtgaga	540
tcccaccctt	gctgaagttg	gcctgtgctg	atacctccag	gtatgagctt	ataatatacg	600
tgacaggtgt	gactttcctc	ttgtctccca	tttctgccat	tgtggcctcc	tacacactag	660
tcctattcac	tgtgtctcgt	atgccatcaa	atgaggggag	gaagaaagcc	cttgtcacct	720
gctcttccca	cctgatttgt	gtcgggatgt	tctatggagc	tgccacattc	atgtatgtct	780
tgcccagttc	cttcacagc	cccaaacaa	acaacatcat	ctctgttttc	tacacaattg	840
tcactccagc	cctgaatcca	ctcatctaca	gcctgaggaa	taaggaggtc	atgcgggcct	900
tgaggagggt	cctgggaaaa	tacatactgc	tggcacattc	cacgctc		947

<210> 431

<211> 897

<212> DNA

<213> Unknown (H38g280 nucleotide)

<220>

<223> Synthetic construct

<400> 431

atgggattcc	ctggcattca	cagttggcag	cactggctct	ccctgcccct	ggctctgtct	60
tacctcttag	ctctcagtc	caacatcctt	atcctgatca	tcatacaaca	agaggcagca	120
ctgcaccagc	ctatgtacta	tttcttgggc	atccttggcta	tggcagacat	aggcctggct	180
accaccatca	tgcctaagat	tttggccatc	ttatggttca	atgctaagac	catcagtctc	240
ctggagtgtc	ttgtctagat	gtatgccata	cattgctttg	tggccatgga	atcaagtacc	300
tttgtctgca	tggctattga	tagatatgta	gccatttgtc	gaccgctacg	atatccatca	360
atcatcactg	aatcttttgt	tttcaaagca	aatgggttca	tggcactgag	aaacagcctg	420
tgtctcatct	cagtgcctct	gttggctgcc	cagaggcatt	actgctccca	gaatcaaatt	480
gagcactgtc	tttgttctaa	ccttggagtc	actagcctat	cttgtgatga	tcgaagaatc	540
aatagcatta	accaggtcct	tttggcttgg	acactcatgg	gaagtgcctt	gggtttgatt	600
attttatcat	atgctcta	actttactct	gtcctgaagc	tgaactctcc	agaagctgca	660
tccaaggcct	taagtacctg	cacctccac	ctcatcttaa	tccttttctt	ctacacagtc	720
atcattgtga	tttccattac	tcgtagtaca	ggaatgagag	ttccccttat	tccagttcta	780
cttaatgtgc	tacacaatgt	cattccccct	gccctgaacc	ccatggtata	tgcactcaag	840
aacaaggaac	tcaggcaagg	cttatacaag	gtacttagac	tgggagtga	gggcacc	897

<210> 432

<211> 980

<212> DNA

<213> Unknown (H38g281 nucleotide)

<220>

<223> Synthetic construct

<400> 432

atgacatgga	gtggcggaac	cctagtggga	gagtgagtga	gtttgtgttg	ctgggcttcc	60
cggctcctgc	gccactacag	gtactatcgt	ttgcccggtta	gtccgcggcc	tatgcgttgg	120
tgttgactga	gaacacactc	atcattatgg	caagtaggaa	ccattccacc	ctccacaaac	180
ccatgtactt	tgttctagct	aatatgtcct	cctctggaga	tctggtatgt	cactgtcact	240
attcccaaga	tgcttgcctg	ctttgttggg	tccaaacagg	atcatggaca	gctaactctc	300
tttgagggat	gcatgacaca	gctctacttt	ctcttggct	tgggctgcac	tgagtgtgtc	360
cttctcgctg	ttatggccta	tgatcgctat	atggccatct	gctatcctct	ccactaccca	420

gtcattgtca	gtggccggct	gtgtgtgcag	atggctgctg	gctcttgggc	tggaggtttt	480
ggcatctcca	tggtcaaagt	ttttcttatt	tctggcctct	cttactgtgg	ccccaacatc	540
atcaaccact	ttttctgtga	tgtctctcca	ttgtctcaacc	tctcatgcac	tgatatgtcc	600
acagcagagc	ttacagattt	catcctggcc	atttttatct	ttctagggcc	actctctgtc	660
actggggcct	cctatgtggc	cattactggg	gctgtgatgc	acacttcttc	ggctgctgga	720
cgctataaag	ccttttccac	ctgtgcctct	catctcactg	ttgtgataat	cttctatgca	780
gccagtatct	tcatctatgc	tgcctaaagg	cactctcagc	ttttgacacc	aacaagttgg	840
tctctgtact	gtatgctgtc	attgtaccat	tgctcaatcc	catcatttac	tgctgtcgca	900
atcaagaggt	caagagagcc	ctatgctgta	ctctgcacct	gtaccagcac	caggatcctg	960
acccaagaa	agctagcaga					980

<210> 433

<211> 998

<212> DNA

<213> Unknown (H38g282 nucleotide)

<220>

<223> Synthetic construct

<400> 433

atggatggag	agaatcactc	agtgggtatct	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tctctgtgac	tctatgtggc	aagcattact	120
ggaaacatcc	tcatgtgtgt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	tcagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatc	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tgggtggtgt	gagatggtgc	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccctctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggaccc	ttgttgctag	tcactccctg	ttccaactgg	480
catttcttgt	taattttacc	ttctgtggcc	ctaagtgtgt	ggacagcttc	tactgtgacc	540
ttcctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tctaactctc	tacgtcttca	660
tctgttttac	tgtttggaaa	cattcctcag	gtggttcata	caaggccctt	tccactcttt	720
cagctcacag	cacagcggtc	cttttgttct	ttgggtccacc	catgtttgtg	tatacatggc	780
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ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaac	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacaatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 434

<211> 840

<212> DNA

<213> Unknown (H38g283 nucleotide)

<220>

<223> Synthetic construct

<400> 434

atgctgctgg	gcaacctggc	catcatcagc	ttcatttgcc	ttgattcccg	ccttcaactca	60
cccatgtact	tcttcctctg	caacttctcc	ctcatggaga	tggtaggtcac	ctccactgtg	120
gtacatagga	tgctggcaga	cctgctatcc	actcacaaga	ccatgtccct	ggccaaatgc	180
ctaaccaggt	ctttctttta	cttctccctg	ggctctgcc	acttccctgat	actcatggtc	240
atggcctttg	atcgctacgt	ggccatctgc	caccctctgc	gctacccaac	catcacgaat	300
ggctccagtgt	gtgtgaagct	ggtgtgggcc	ttgtgggtgg	ttgggtttcct	ctccactgtc	360
tctcccacac	tgcagaaaac	acgactctgg	ttctgtggcc	ctaacaatcat	cggccactac	420
ttctgtgact	ctgccccgct	gctcaagctt	gcctgctctg	acaccgcca	cattgagcgc	480
atggacctct	tctgtccct	gctctttgtg	ctgaccacca	tgctgcttat	catcctctcc	540
tacatcctca	ttgtggctgc	agtgtgtcac	atcccttcc	cctctggatg	ccagaaggcc	600
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actgcaatgg	taacccttt	cctcaacccc	ttcatcttca	ccttccggaa	tgagaagggtc	780
aaggagggtca	ttgaggatgt	gactaaaagg	atcttccctg	gagaccagc	agcctgtagg	840

<210> 435
 <211> 939
 <212> DNA
 <213> Unknown (H38g284 nucleotide)

<220>
 <223> Synthetic construct

<400> 435
 atggaaactg caaattacac caaggtgaca gaatttggtc tcaactggcct atcccagact 60
 ccagaggtcc aactagtcct atttggtata ttctatcct tctatttggt catcctacca 120
 ggaaatatcc ttatcatttg caccatcagt ctagaccctc atctgacctc tcctatgtat 180
 ttccctgttg ctaatctggc ctcccttgat atttggtact ctccattac agcccctgaa 240
 atgctcatag acttcttctt ggagaggaag ataatttctt ttgatggatg cattgcacag 300
 ctcttctctt tacactttgc tggggcttcg gagatgttct tgctcacagt gatggccttt 360
 gacctctaca ctgctatctg ccgaccctc cactatgcta ccatcatgaa tcaacgtctc 420
 tgctgtatcc tgggtgctct ctccctggagg gggggcttca ttcattctat catacagggtg 480
 gctctcattg ttcgacttcc tttctgtggg cccaatgagt tagacagtta cttctgtgac 540
 atcacacagg ttgtccggat tgcctgtgcc aacaccttcc cagaggagtt agtgatgatc 600
 tgtagtagtg gtctgatctc tgtggtgtgt ttgattgctc tgttaatgtc ctatgccttc 660
 cttctggcct tgttcaagaa actttcaggc tcagggtgaga ataccaacag ggccatgtcc 720
 acctgctatt cccacattac cattgtgggt ctaatgtttg ggccatccat ctacatttat 780
 gctgcgccat ttgactcgtt ttccctagat aaagtgggtg ctgtgttcaa tactttaata 840
 ttccctttac gtaatcccat tatttacaca ttgagaaaca aggaagtaaa ggcagccatg 900
 aggaagtggg tcaccaaata tattttgtgt aaagagaag 939

<210> 436
 <211> 640
 <212> DNA
 <213> Unknown (H38g285 nucleotide)

<220>
 <223> Synthetic construct

<400> 436
 tgcttggtgt aactgtacca ggtatgcctg ctccaccagag acccgatctt gcaagacctc 60
 cattaaaagc ctcgatatca ttgttctcct tgtctctgag tctattcttt gggtttggac 120
 aggtgagtgt gtttctcaca atgacacaga gtgtactgtg aatgagcctg tttgcttcat 180
 gttctcctag atgcccttct gcctcagcta gatcttgccc tagacctact atgagcaagt 240
 ggtcatgctg aatctgggat gtgcagacat cacatatata gtccatacct gtggtctctt 300
 atggcctttt ctgtggatgg atttgatata tttggcatta ttatccacag atatcagaca 360
 ttgcaggctg tactgtagct acctgcaaaa gaatctgtgc ccaaagtatt tagcatatat 420
 gccttccata tttgcgtcac cctgtacctg ctcatgatag gattctactc ctttttttct 480
 tgttgcttta gctaccatac actcacagtg attcccatct ccttgctcat ccttttactc 540
 attagtgcct tccatgttca ataccatcac ctgtggggta aagagtaagc atatccaaga 600
 aaacatggta cagagatttt gtgggaaaat ttccctgccat 640

<210> 437
 <211> 989
 <212> DNA
 <213> Unknown (H38g286 nucleotide)

<220>
 <223> Synthetic construct

<400> 437
 atgtgtctct tgaccttgca ggtcactggc ccaatgaatg tctctgagcc aaattccagc 60
 tttgctttag taaatgaatt tatactccaa gatttatctt ttgagtggac aattcagatc 120
 ttctcttctt cactcttcac tacaacatat gcactgacca taacaggaaa cggagccatt 180
 gcttgcgccc tgtggtgtga ccggcgacgt cacactccca tgtacatgtt cctgggaaat 240

ttctcctttt	tagagatatg	gatatgtctct	tctacagttc	ccaagatggt	ggtcaacttc	300
ctttcagaga	aaaaaacat	ctcctttgct	ggatgttttc	tccaatttta	tttctcttc	360
tctttgggta	catctgaatg	cttgattttg	actgtgatgg	cctttgatca	gtaccttgtt	420
atctgccatc	ccttgcaact	tcctaataaa	tcatgactgg	gcattctctg	gccaaactgg	480
tcatactgtg	ctgggtttgt	ggatttctgt	gtttcctgat	ccccactgtt	ctcatctctc	540
agatgccctt	ctgtgggtcca	aacattaatg	accatgttgt	gtgtgaccca	gggccactat	600
ttgcattggc	ttgtgtctct	gccccagaa	tccaactgtt	ttgctacact	ctaagctcat	660
tagttatttt	tggttaacttc	ctctttatta	ttggatccta	tactcttgct	ctgaaagctg	720
tgttgggtat	gccttcgagc	actgggaaac	ataaagcctt	ctctacctgt	gggtctcatt	780
tggctgtggg	atcaactgtt	tatggctctc	ttatgggtcat	gtgtgtgagt	ccaggacttg	840
gacactctat	ggggatgcag	aaaatcaaaa	ctttgttcta	tgctatgggt	accccactct	900
tcaatcccct	tatctatagc	ctccagaata	aggagataaa	ggcagccctg	aggaaagtgc	960
tggggagtgc	caacataatc	taagccata				989

<210> 438

<211> 930

<212> DNA

<213> Unknown (H38g287 nucleotide)

<220>

<223> Synthetic construct

<400> 438

atgatggaca	accactctag	tgccactgaa	tccaccttc	taggcttccc	tgggtcccaa	60
ggactacacc	acattctttt	tgctatatct	ttttcttct	atttagtgac	attaatggga	120
aacacggtca	tcattgtgat	tgtctgtgtg	gataaacgtc	tgacgtcccc	catgtatttc	180
ttcctcagcc	acctctctac	cctggagatc	ctgggtcaca	ccataattgt	ccccatgatg	240
ctttggggat	tgctcttctt	gggatgcaga	cagtatcttt	ctctacatgt	atcgctcaac	300
ttttcctgtg	ggaccatgga	gtttgcatta	cttggagtga	tggctgtgga	ccgttatgtg	360
gctgtgtgta	accctttgag	gtacaacatc	attatgaaca	gcagtacctg	tattttgggtg	420
gtaatagtgt	catgggtgtt	tggaatttct	tctgaaatct	ggcccatcta	tgccacattt	480
cagtttacct	tccgcaaatc	aaattcatta	gaccattttt	actgtgaccg	agggcaattg	540
ctcaaaactgt	cctgcgataa	cactcttctc	acagagttta	tccttttctt	aatggctgtt	600
tttattctca	ttggttcttt	gatccctacg	attgtctcct	acacctacat	tatctccacc	660
atcctcaaga	tcccgcagc	ctctggccgg	aggaaagcct	tctccacttt	tgctcccccac	720
ttcacctgtg	ttgtgattgg	ctatggcagc	tgcttgtttc	tctacgtgaa	acccaagcaa	780
acacagggag	ttgagtacaa	taagatagtt	tccctgttgg	tttctgtgtt	aacccccctc	840
ctgaatcctt	tcattctttac	tcttcggaat	gacaaagtca	aagaggccct	ccgagatggg	900
atgaaacgct	gctgtcaact	cctgaaagat				930

<210> 439

<211> 915

<212> DNA

<213> Unknown (H38g288 nucleotide)

<220>

<223> Synthetic construct

<400> 439

atgtccaaca	caaatggcag	tgcaatcaca	gaattcattt	tacttgggct	cacagattgc	60
ccggaactcc	agtctctgct	ttttgtgctg	tttctgggtg	tttacctcgt	caccctgcta	120
ggcaacctgg	gcatgataat	gttaatgaga	ctggactctc	gccttcacac	gcccattgtac	180
ttcttctcca	ctaacttagc	ctttgtggat	ttgtgctata	catcaaattg	aacccccgag	240
atgtcgacta	atatcgatc	tgagaagacc	atttcctttg	ctggtttgctt	tacacagtgc	300
tacattttca	ttgcccttct	actcaactgag	ttttacatgc	tggcagcaat	ggcctatgac	360
cgctatgtgg	ccatatatga	ccctctgcgc	tacagtgtga	aaacgtccag	gagagtttgc	420
atctgcttgg	ccacatttcc	ctatgtctat	ggcttctcag	atggactctt	ccaggccatc	480
ctgaccttcc	gcctgacctt	ctgtagatcc	agtgtcatca	accacttcta	ctgtgctgac	540
ccgccgtcca	ttaagctttc	ttgttctgat	acttatgtca	aagagcatgc	catgttcata	600
tctgtgtggc	tcaactctc	cagctccctc	accatgtctc	tgggtgtccta	tgcttctcatt	660
cttgctgcca	tcctccggat	caaatcagca	gaggggaaggc	acaaggcatt	ctccacctgt	720

ggttcccata	tgatggctgt	caccctgttt	tatgggactc	tcttttgcac	gtatataaga	780
ccaccaacag	ataagactgt	tgaggaatct	aaaataatag	ctgtctttta	cacctttgtg	840
agtccggtac	ttaatccatt	gatctacagt	ctgaggaata	aagatgtgaa	gcaggccttg	900
aagaatgtcc	tgaga					915

<210> 440

<211> 939

<212> DNA

<213> Unknown (H38g289 nucleotide)

<220>

<223> Synthetic construct

<400> 440

atggcaaatc	tgagccagcc	ctccgaattt	gtcctcttgg	gcttctcctc	ctttggtgag	60
ctgcaggccc	ttctgtatgg	ccccttctc	atgctttatc	ttctcgcctt	catgggaaac	120
accatcatca	tagttatggt	catagctgac	acccacctac	atacaccat	gtacttcttc	180
ctgggcaatt	tttccctgct	ggagatcttg	gtaaccatga	ctgcagtgcc	caggatgctc	240
tcagacctgt	tggtcccca	caaagtcatt	accttactg	gctgcatggt	ccagttctac	300
ttccactttt	ccctgggggc	cacctccttc	ctcatcctga	cagacatggc	ccttgatcgc	360
tttgtggcca	tctgccaccc	actgcctat	ggcactctga	tgagccgggc	tatgtgtgtc	420
cagctggctg	gggctgcctg	ggcagctcct	ttcctagcca	tggtaccac	tgtcctctcc	480
cgagctcatc	ttgattactg	ccatggcgac	gtcatcaacc	acttcttctg	tgacaatgaa	540
cctctcctgc	agttgtcatg	ctctgacact	cgccctgttg	aattctggga	ctttctgatg	600
gccttgacct	ttgtcctcag	ctccttctg	gtgacctca	tctcctatgg	ctacatagtg	660
accactgtgc	tgcggatccc	ctctgccagc	agctgccaga	aggttttctc	cacttgccgg	720
tctcaacctca	cactgggtct	catcggtac	agtagtacca	tctttctgta	tgtaggcct	780
ggcaaagctc	actctgtgca	agtcaggaag	gtcgtggcct	tggtgacttc	agttctcacc	840
ccctttctca	atccctttat	ccttaccttc	tgcaatcaga	cagttaaaac	agtgtctacag	900
gggcagatgc	agaggctgaa	aggcctttgc	aaggcacia			939

<210> 441

<211> 948

<212> DNA

<213> Unknown (H38g290 nucleotide)

<220>

<223> Synthetic construct

<400> 441

atgaagatag	caaacaacac	agtagtgaca	gaatttatcc	tccttgggtct	gactcagtct	60
caagatatcc	agctcttggg	ctttgtgctg	atcttaattt	tctaccttat	catcctccct	120
ggaaattttc	tcattatttt	caccataagg	tcagaccctg	ggctcacagc	ccccctctat	180
ttattttctg	gcaacttggc	cttcttggtg	gcacccact	ccttcattgt	ggctcccagg	240
atgttgggtg	acttctcttc	tgagaagaag	gtaatctcct	acagaggctg	catcactcag	300
ctctttttct	tgcacttctc	tgaggaggag	gagggtattac	tccttgttgt	gatggccttt	360
gaccgctaca	tcgccatctg	ccggcctctg	cactgttcaa	ctgtcatgaa	ccctagagcc	420
tgctatgcaa	tgatgttggc	tctgtggcct	gggggttttg	tccactccat	tatccagggtg	480
gtctctcatcc	tccgcttgcc	tttttgtggc	ccaaaccagc	tggaacaact	cttctgtgat	540
gtccgacagg	tcacaaagct	ggcttgacc	gacatgtttg	tggtggagct	tctgatggtc	600
ttcaacagtg	gcctgatgac	actcctgtgc	ttctgggggc	ttctggcttc	ctatgcagtc	660
atcctctgcc	atgttcgtag	ggcagcttct	gaagggaaga	acaaggccat	gtccacgtgc	720
accactcgtg	tcattattat	acttcttatg	tttggacctg	ctatcttcat	ctacatgtgc	780
cctttcaggg	ccttaccagc	tgacaagatg	gtttctctct	ttcacacagt	gatctttcca	840
ttgatgaatc	ctatgattta	tacccttcgc	aaccaggaag	tgaaaacttc	catgaagagg	900
ttattgagtc	gacatgtagt	ctgtcaagtg	gattttataa	taagaaac		948

<210> 442

<211> 1034

<212> DNA

<213> Unknown (H38g291 nucleotide)

<220>

<223> Synthetic construct

<400> 442

atgcaccttc	ccaattcttc	tgaaattgcg	attaccacct	tctttctgat	tggaatacca	60
gggctggagc	atgcccatat	atggatatct	gtcccatct	gcctcatgta	cttggtagcc	120
atcctaggca	attgcacaat	cctctttgtt	atcaggactg	agccctcact	ccatgcaccc	180
atgtactatt	tcctttccat	gttggtgtc	tctgatctgg	gcctgtccct	ctcctaccta	240
cccactatgc	tgaggatctt	tgtattcaat	gccacaggaa	tctcctcaaa	tgctcgcttt	300
gctcaagaat	tctttattca	tggattcaca	gatatggagt	cctcagtgtc	tctcgtcatt	360
tcttttgacc	ggttttggcc	atatgccacc	ctctgaggta	catatctgag	gtactgggtga	420
gctgtatcct	caccagtgtc	agagtgtcca	aaatggggct	gttggtttct	attaaaagag	480
aaacaacact	aaactcatta	aaagaaacaa	ctaactcatg	ctgttagtac	tcccatttcc	540
tttactctt	acaaggttga	catattgtag	gaaaagccta	ctctctcatt	cctattgtct	600
ccatcaggat	gtcaggaagc	tggcctgtct	cgacaacact	gtcaacttct	tctatgggtt	660
ctttcttgcc	ctctgtatga	tgtcagaaag	tgtgttcatt	actgtgtctt	atgtgtctat	720
cctgaagacg	atcatgggaa	ttggatccca	tagggagcgg	ctcaaggccc	tcaacacctg	780
tgtctcccat	atctgtgctg	tgcttatctt	ctatgcgccc	gtcattgctt	tggcatccat	840
gcaactgctt	ggcatccatg	aactgctttg	gcaagcacag	gtccccactg	gccatgatcc	900
tcattgtctga	tgttttcttg	ctagtgccac	ctcttatgaa	tcccattgta	tattgtgtga	960
agacacagca	aattcatgaa	aaagttttag	gaaaactggg	tctacaacaa	cggtgtcagt	1020
aaacgtggta	caag					1034

<210> 443

<211> 713

<212> DNA

<213> Unknown (H38g292 nucleotide)

<220>

<223> Synthetic construct

<400> 443

ccacttattt	gaccagatcc	attcatcttt	acacaattgt	gttcattcct	taataaatat	60
gtagcgtcaa	ctcgggttaa	tgatcataac	atagatcagg	ctccataatc	caggagcata	120
atcctaaatc	tgctcttatt	tcctttggga	ttaaaggcat	gtggagcaat	gttaattctt	180
gtttctcttc	tagccttccc	agagagaaaag	agctaggatt	gaaacagcga	ggggaactac	240
tctagtgtca	ctcaattctg	tctcctgggc	ttcccagggt	ttgaggaaact	gccccatttc	300
cttttggtta	acttcttctt	tcacttgatg	agattaatgg	gaaatgcagt	catttacctg	360
gttgaattga	tgaagtcttc	agtctcccgg	ggatttcttc	ctcagtcaac	tcttcatctt	420
ttcacacagt	ctattaatgg	acatttccat	tgttattgct	tctttgatcc	agattgatcc	480
ctactccagt	atccctcag	cgtctggcca	aaaaataatc	cttctccact	catgcctccc	540
atttcacctg	tgtggggatt	gactatgaca	gctgcttggt	tctctacgtg	aaacccaagc	600
aaatttgggc	agcagaataa	aacaaggtag	ttttctctgt	tattttcctg	ttgacccctt	660
ttctgaacct	tcttacaggt	cagatttact	gacctaaatc	agtttttaggt	ggg	713

<210> 444

<211> 931

<212> DNA

<213> Unknown (H38g293 nucleotide)

<220>

<223> Synthetic construct

<400> 444

cccattgaaag	tggtcaacaa	tgctactgag	tttatattcc	tgggactttc	ccaagattct	60
ggaatgcaat	tgatgttctt	tgtcttattt	ctcctcttct	acgtcgtgat	catgggtggga	120
aatttgctca	ttttgcttat	ggtcttttct	gactcccgac	tacacacacc	catgtatttc	180
ttcctcagta	acctgtcttt	tgtggacatt	gcctgttctt	cagccacagc	acccaagatg	240
attgaagact	ttgtttctga	gaaaaagact	atttcttact	ggggctgtat	aactcagatg	300
tttaccttcc	acttttttgg	ttgtgctgag	atttttgggt	tgactgtcat	ggcttttgat	360

cgtatgctg	ctatctgcc	acccctccgt	tacactgtca	tcattgagtg	taatgcttat	420
actgtgctg	catcactgtc	ctgggtgggg	gcctgggtc	attcctttgt	tcagaccctc	480
ctgaccttc	agctgccctt	ctgtaatgct	cagggtatag	accattactt	ttgtgatgtc	540
caccagtc	taaaacttgc	ctgtgctgat	acaactctgg	taaatatgtt	ggtgggtgcc	600
aacagtggc	tcattctcct	ggggtgtttc	ctcattcttt	tggcctccta	cacagtcatt	660
ctgtttagt	ttcaaaaaca	gtctgcagag	agctgacaca	aagttctctc	tacctgtgga	720
tctcatctga	ctatagtaac	tttcttcttt	gttcctgtga	tctttattta	tctccatcca	780
ctactttccc	attggataaa	gctgtgtctg	tgttctatac	caccatcacc	ccaatgtctga	840
acccactcat	ctatactctg	aggaatgagg	agtaaagaat	gccatgaggc	ggctatggag	900
tagcaagatc	tccttgaagg	aaaagcagag	a			931

<210> 445

<211> 968

<212> DNA

<213> Unknown (H38g294 nucleotide)

<220>

<223> Synthetic construct

<400> 445

atggaaatcc	taagcaactc	aacatctaaa	tttccaacct	tcttggtgac	cggcattcct	60
ggcctagagt	ctgcccattg	ctggatctcc	attcctttct	gctgttttta	tgccattgcc	120
ctctctggga	acagcgtgat	cctgtttgtc	atcattaccc	agcagagtct	ccatgaacct	180
atgtattatt	tcctctccat	gctatcagcc	actgatctgg	gcttgactgt	ttcttcattg	240
tcaacaacat	taggtatcct	ctggtttgag	gcagtgaat	cagtctatac	agctgcattg	300
tccagatgtt	ttttcttcat	ggattcactt	ttatggaatc	tggagtgtct	gtggctacag	360
cctttgaccg	ttatgtggcc	atctgtgatc	ctctgaggta	cactaccatt	ctcactaatt	420
ccagaatcat	tcaaattggg	cttctgatga	ttacacgtgc	tatagtacta	atattaccac	480
tacttttgct	ccttaagcct	ctctatttct	gtagaatgaa	tgccctttct	cactcctatt	540
gttaccatcc	agatgtgatt	caattagcat	gttcagacat	tccggcacaat	agcatctgtg	600
gattaattga	tctcatcctg	accactggaa	tagatacacc	atgcattgtc	ctgtcatata	660
tcttaattat	tcgctttgtc	ctcagaattg	cctcccctga	agaatggcac	aaggcttcca	720
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tatactgct	tttaccctct	gtgctcaacc	ccatcatcta	cagtgtaaaa	acaaaacaaa	900
tccgcaaggc	tatgctcagt	ctgctgctta	caaatgaac	agacatagtt	ttatttgata	960
caaacctg						968

<210> 446

<211> 963

<212> DNA

<213> Unknown (H38g295 nucleotide)

<220>

<223> Synthetic construct

<400> 446

cacacagagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gaccgagaac	tcagccctat	cctcgttttg	ctgtccctgt	ccctgtccat	gtatctgggtc	120
acggtgctga	ggaacctgct	cagcatcctg	gctgtctgct	ctgactcccc	cctccacacc	180
cccaggtact	tcttctcttc	caacctgtgc	tgggttgaca	tcggtttcac	ctccgccacg	240
gttcccaaga	tgattgtgga	catgcagtcg	catagcagag	tcacgtctca	tgccgggtgt	300
ctgacgcaga	tgtctttctt	ggtccttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	actgctttgt	agccatctgt	cgcctctgtc	actaccaggt	catcgtgaat	420
cctcacctct	gtgtcttcgt	tttgggtgtc	tttttcttta	gcctgttgga	ttcccagctg	480
cacagttgga	ttgtgttaca	attcaccatc	gtctagaatt	tggaaatctc	taattttgtc	540
tgtgacctct	ctcaacttct	caaacttgcc	tggtctgaca	gcgtcatcaa	tagcatattc	600
atatatttgc	atagtactat	gtttgggttt	cttccatttt	cagggatcct	atggtcttac	660
tataaaatca	tcccctccat	tctaaggatt	tcacgtcag	atgggaagta	taaagccttc	720
tccacctgtg	gctctcacct	agccgttggt	tgctgatttt	atggaacagg	cattggcatg	780
tacctgactt	cagctgtgtc	acaaccccc	aggaatggtg	tgggtggcatc	agtgatgtat	840

gctgtgggtca ccccatgct gaaccttttc atctacagcc tgagaaacag gaacatacaa 900
 agtgcctgt ggaggctgca cagcagaaca gtcgaatctc atgatttgtt ccaccccttc 960
 tct 963

<210> 447

<211> 975

<212> DNA

<213> Unknown (H38g296 nucleotide)

<220>

<223> Synthetic construct

<400> 447

atggcaatat tcaataacac cacttcgtct tcctcaaact tcctcctcac tgcattccct 60
 gggctggaat gtgctcatgt ctggatctcc attccagtct gctgtctcta caccattgcc 120
 ctcttgggaa acagtatgat cttctctgtc atcattacta agcggagact ccacaaaccc 180
 atgtattatt tcctctccat gctggcagct gttgatctat gtctgacct tacgaccctt 240
 cccactgtgc ttggtgttct ctggtttcat gccgggaga tcagctttaa agcttgcttc 300
 attcaaatgt tctttgtgca tgccttctcc ttgctggagt cctcgggtgct ggtagccatg 360
 gcctttgacc gcttcgtggc tatctgtaac ccactgaact atgctactat cctcacagac 420
 aggatggctc tggatagagg gctggctatc tgcattagac cagcagtttt ctacttccc 480
 ctctctgtag ccataaacac tgtgtctttt catgggggtc acgagctttc ccattccattt 540
 tgcaccacc cagaagtgat caaatacaca tattccaaac cttggatcag cagtttttgg 600
 ggactgtttc ttacgtctta cctgaatggc actgacgtat tgtttattct ttctcctat 660
 gtcctgatcc tccgtactgt tctgggcatt gtggccgaa agaagcaaca aaaagctctc 720
 agcacttgtg tctgtcacat ctgtgcagtc actattttct atgtgccact gatcagcctc 780
 tctttggcac accgcctctt ccactccacc ccaagggtgc tctgtagcac ttggccaat 840
 atttatctgc tctaccacc tgtgctgaac cctatcattt acagcttgaa gaccaagaca 900
 atccgccagg ctatgttcca gctgtccaa tccaagggtt catgggggtt taatgtgagg 960
 ggtcttaggg gaaga 975

<210> 448

<211> 945

<212> DNA

<213> Unknown (H38g297 nucleotide)

<220>

<223> Synthetic construct

<400> 448

atggagacgt gggatgaacca gtcctacaca gatggcttct tcctcttagg catcttctcc 60
 cacagtactg ctgacctgt cctcttctcc gtggttatgg cggctctcac agtggccctc 120
 tgtgggaatg tcctcctcat cttcctcatc tacatggacc ctacacctca ccccccatg 180
 tacttcttcc tcagccagct ctccctcatg gacctcatgt tggctgttac caatgtgcca 240
 aagatggcag ccaacttcc gtctggcagg aagtccatct cctttgtggg ctgtggcata 300
 caaattggcc tctttgtctg tcttgtggga tctgaggggc tcttgtggg actcatggct 360
 tatgaccgct atgtggccat tagccacca cttcactatc ccacctcat gaatcagagg 420
 gtctgtctcc agattactgg gagctcctgg gcctttggga taatcgatgg cttgatccag 480
 atggtggttag taatgaattt cccctactgt ggcttgagga aggtgaacca tttcttctgt 540
 gagatgctat ccttgttgaa gctggcctgt gtagacacat ccctgtttga gaagggtgata 600
 tttgtctgtg gtgtcttcat gcttctcttc ccattctcca tcactgtggc ctctatgct 660
 cgcattctag ggaactgtgt gcaaattgcac tctgtcagg cctggaaaaa ggccctggcc 720
 acctgtcct cccacctgac agctgtcacc ctcttctatg gggcagccat gttcatctac 780
 ctgaggccta ggcactaccg ggccccagc catgacaagg tggcctctat ctctacacg 840
 gtccttactc ccattgtcaa cccctcatt tacagcttga ggaacagggg ggtgatgggg 900
 gcactgagga aggggctgga ccgctgcagg atcggcagcc agcac 945

<210> 449

<211> 965

<212> DNA

<213> Unknown (H38g298 nucleotide)

<220>

<223> Synthetic construct

<400> 449

atgtcaccac	tcaaccaaac	tactgagaac	caccagagct	tcttcaccct	gactgggatt	60
ccaggaatgc	cagagaaaga	cttatggatg	gccttgcccc	tctgtcttct	ttatagcacc	120
acgatcttgg	gaaatgtcac	catccttggt	gtcatcaaag	ttgagcaaag	tctccatgag	180
cccatgtatt	tttctagcca	tgttagctgc	cactgacctc	agcctttcac	tgtcttccat	240
gcctaccatg	gtcagtgttc	actggttcaa	ctggcggttca	ataactttta	atggctgcct	300
tatccagatg	ttcttcatcc	acacatttgg	gggagtggaa	tcagggtgtc	tggtggccat	360
ggcctttgat	cgctttgtgg	ccatccgctt	tcctttgcac	tatgctacaa	ttctcactca	420
cagtgtcatc	agcaagattg	cagcagccat	cctgctacgg	agtgtggggg	ctgtgctccc	480
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tggcctgttg	gctgtgatct	tcattcattgt	actagatgcc	taaatacttt	tggcctctta	660
cattctaate	ctgcaggcag	tattgagcat	tgcttcccag	gaagacaggc	tcaaggctct	720
caacacctgt	ctctctcata	tctgcagtgc	tgcttttcta	tgtgcctctc	attgggtatga	780
ccctaattca	tcgctatggg	aagcatttgt	caccactaat	acacacattc	atggccaata	840
tctacctgct	tctccctcct	gtgctcaatc	ccattgtgta	cagtgttagg	accaagcaga	900
tctgatagca	gattgtccag	gccttttgtg	gggctagggg	tagcccttaa	tgccatctac	960
tattt						965

<210> 450

<211> 936

<212> DNA

<213> Unknown (H38g299 nucleotide)

<220>

<223> Synthetic construct

<400> 450

atgtctgttc	tcaataactc	cgaagtcaag	cttttctctc	tgattgggat	cccaggactg	60
gaacatgccc	acatttgggt	ctccatcccc	atttgcctca	tgtacctgct	tgccatcatg	120
ggcaactgca	ccattctctt	tattataaag	acagagccct	cgcttcatga	gcccattgat	180
tatttccctg	ccatgttggc	tgtctctgac	atgggcctgt	ccctctctct	ccttctctacc	240
atgttgaggg	tcttcttgtt	caatgccatg	ggaatttcac	ctaattgctg	ctttgctcaa	300
gaattcttca	ttcatggatt	cactgtcatg	gaatcctcag	tacttctaata	tatgtctttg	360
gaccgctttc	ttgccattca	caatccctta	agatacagtt	ctatcctcac	tagcaacagg	420
gttgctaaaa	tgggacttat	tttagccatt	aggagcattc	tcttagtgat	tccatttccc	480
ttcaccttaa	ggagattaaa	atattgtcaa	agaatcttct	tttctcactc	atactgtctt	540
catcaggata	ccatgaagct	ggcctgctct	gacaacaaga	ccaatgtcat	ctatggcttc	600
ttcattgctc	tctgtactat	gctggacttg	gcactgattg	ttttgtctta	tgtgctgac	660
ttgaagacta	tactcagcat	tgcacttttg	gcagagaggc	taaaggccct	aaatacctgt	720
gtctcccaca	tctgtgctgt	gctcaccttc	tatgtgcccc	tcataccctc	ggctgccatg	780
catcactttg	ccaagcacaa	aagccctctt	gttggtgatcc	ttattgcaga	tatgttcttg	840
ttgggtgccg	cccttatgaa	ccccattgtg	tactgtgtaa	agactcgaca	aatctgggag	900
aagatcttgg	ggaagttgct	taatgtatgt	gggaga			936

<210> 451

<211> 923

<212> DNA

<213> Unknown (H38g300 nucleotide)

<220>

<223> Synthetic construct

<400> 451

atgaaaataa	atgacagctc	aggggaagac	ttcatcttag	ttggcttctc	agaatatccc	60
caggctgagt	tcatactttc	tctgtttgtc	tccgggttct	acaccatgac	attcacaggg	120
aacacagcca	tcattcttgg	ctctctgctg	gactaccggc	tccgcacccc	aatgtacttc	180

ttcctccgaa	agctctcatt	tctggacatg	tgtttcacca	cctgcattgt	ccttcagatg	240
ctgggtgaaca	tctgggggaga	gagtaagaag	gtcagctatg	taggctgcat	gggttcagtat	300
tctgtagcct	tggctcttgg	ctccacagag	tgtgtgcttc	ttgctatcat	ggctgtggac	360
cgttatgttg	cgcgtcgcgtg	gcccccttcac	tatgttacaa	tcatgcacca	acagatctgc	420
cactttctcg	cagccttgtc	ctggttttct	gggttagcca	actctctctt	tactcttca	480
ctaaccacca	ttttgcctct	gtgtggccac	cgccgtgtgg	accatttctt	tgtgagggtcc	540
tgctcattgt	caagctgtcc	tgcgtggaca	ccggcccaac	tgaattgaag	atgttaattg	600
ctcgtgtgat	cacccttggc	cttccagtg	gcaccatcct	cacctcctat	gcctgcattg	660
ccagggctgt	gctgaggctg	cagtctgctg	aaggtcagca	gaaggccttt	gggacttgtg	720
cctcccacct	gatgggtggc	ttgctgttct	atggaaccat	catgttcacg	tgtcttcagc	780
tgaagagtaa	ctactctcag	attcagggaa	agctgcttcc	tcttgtttat	accattgctg	840
cccccaccta	gaaccaccta	atctatgcac	tgaggaacaa	agttgtaaag	agggcaattg	900
gaaaattgat	ctggaaggat	tca				923

<210> 452

<211> 951

<212> DNA

<213> Unknown (H38g301 nucleotide)

<220>

<223> Synthetic construct

<400> 452

atggaaatag	ataaccagac	gtgggtgaga	gaatttattc	tccttggtct	atccagtgc	60
tggtgcactc	agatatccct	gttttccctg	ttcttgggtca	catacctcat	gacagtgtg	120
gggaactgtc	tcattgtcct	tctgatcaga	ctggacagcc	gactccacac	tcccatgtat	180
ttctttctca	ccaacctctc	ccttgctgat	gtctcctatg	ccacaagcgt	agtccccag	240
ctgctggcac	attttcttgc	agaacataaa	gccatcccat	tccagagctg	tgcagccag	300
ttatttttct	ccctggcctt	gggtgggatt	gagtttgttc	tcctggcagt	gatggcctat	360
gaccgccatg	tggtctgtgc	tgaccgcctg	cgatactcgg	ccatcatgca	tggagggtg	420
tgtgtcagg	tggccatcac	atcctgggtc	agtgggtcca	tcaactctct	tgtgcagact	480
gctatcacct	ttcagctgcc	catgtgcact	aacaagttta	ttgatcacat	atcctgtgaa	540
ctcctagctg	tggtcaggct	ggcttgtgtg	gacacctcct	ccaatgaggc	tgccatcatg	600
gtgtctagca	ttgttcttct	gatgacacct	ttctgcctgg	ttctgttgtc	ctacatccgg	660
atcatctcca	ccatccctaaa	gatccagctc	agagaaggaa	gaaagaaagc	cttccacacg	720
tgtgcctctc	acctcacggg	ggttgccctg	tgtacaggca	caacgatttt	cacttacatc	780
cagcccaact	ctggctccctc	agtccttcaa	gagaagctga	tctctgtctt	ctatgccatt	840
gttatgcctc	tgtgaaccc	tgtgatttat	agtctaagga	ataaagagg	gaagggggcc	900
tggcataaac	tattagagaa	attctctgtg	ttaacatcca	agctgggaac	t	951

<210> 453

<211> 918

<212> DNA

<213> Unknown (H38g302 nucleotide)

<220>

<223> Synthetic construct

<400> 453

atggaaggga	aaaatcaaac	caatatctct	gaatttctcc	tcctgggtct	ctcaagttgg	60
caacaacagc	aggtgctact	ctttgcactt	ttcctgtgtc	tctatttaac	agggtgtgtt	120
ggaaacttac	tcattcttgc	ggccattggc	tcggatcact	gccttcacac	acccatgtat	180
ttcttccctg	ccaatctgtc	cttggtagac	ctctgccttc	cctcagccac	agtccccag	240
atgctactga	acatccaaac	ccaaacccaa	accatctcct	atcccggctg	cctgggtcag	300
atgtatttct	gtatgatgtt	tgccaatatg	gacaattttc	ttctcacagt	gatggcatat	360
gaccgttacg	tggccatctg	tcacccttta	cattactcca	ccattatggc	cctgcgcctc	420
tgtgcctctc	tggtagctgc	accttgggtc	attgccattt	tgaaccctct	cttgcacact	480
cttatgatgc	cccacttgca	cttctgtctc	gataatgtta	tccaccattt	cttctgtgat	540
atcaactctc	tcctccctct	gtcctgttcc	gacaccagtc	ttaatcagtt	gagtggtctg	600
gctacgggtg	ggctgatctt	tgtggtacct	tcagtgtgta	tcctgggtatc	ctatatcctc	660
attgtttctg	ctgtgatgaa	agtccttctt	gcccaggaa	aactcaaggc	tttctctacc	720

tgtggatctc	accttgccct	ggtcattctt	ttctatggag	caaacacagg	ggtctatatg	780
agcccttat	ccaatcactc	tactgaaaaa	gactcagccg	catcagtcac	ttttatgggt	840
gtagcacctg	tggtgaatcc	attcatttac	agtttaagaa	acaatgaact	gaaggggact	900
ttaaaaaaga	ccctaagc					918

<210> 454

<211> 933

<212> DNA

<213> Unknown (H38g303 nucleotide)

<220>

<223> Synthetic construct

<400> 454

atgggaccca	gaaaccaaac	agctgtttca	gaatttcttc	tcatgaaagt	gacagaggac	60
ccagaactga	agttaatccc	tttcagcctg	ttcctgtcca	tgtacctggg	caccatcctg	120
gggaacctgc	tcattctcct	ggctgtcatc	tctgactccc	acctccacac	ccccatgtac	180
ttccttctct	ttaatctctc	ctttactgac	atctgtttaa	ccacaaccac	agtcccaaag	240
atcctagtga	acatccaagc	tcagaatcag	agtatcactt	acacaggctg	cctcaccacg	300
atctgtcttg	tcttggtttt	tgctggcttg	gaaagtgtct	ttcttgacgt	catggcctac	360
gaccgctatg	tgccattttg	ccaccactg	aggtacacag	tcctcatgaa	tgccatttcc	420
tggggcttgc	tgattcttct	ctccatgttc	atgagcacta	tggatgccct	ggttcagagt	480
ctgatgggat	tgacagctgc	cttctgcaaa	aacgttgaaa	tccttttggt	cttctgtgaa	540
gtcgttcagg	tcacaaagct	cgctgttctt	gacaccctca	tcaacaacat	cctcatatat	600
tttgcaagta	gtgtatttgg	tgcaattcct	ctctctggaa	taattttctc	ttattctcaa	660
atagtcacct	ctgttctgag	aatgccatca	gcaagaggaa	agtataaagc	gttttccacc	720
tgtggctgtc	acctctctgt	tttttccctg	ttctatggga	cagcttttgg	gggtgacatt	780
agttctgctg	ttgctgagtc	ttcccgaatt	actgctgtgg	cttcagtgat	gtacactgtg	840
gtccctcaaa	tgatgaaccc	cttcatctac	agcctgagaa	ataaggagat	gaagaaagct	900
ttgaggaaac	ttattggtag	gctgtttcct	ttt			933

<210> 455

<211> 939

<212> DNA

<213> Unknown (H38g304 nucleotide)

<220>

<223> Synthetic construct

<400> 455

atggaagcga	gaaaccaaac	agctattttca	aaattccttc	tcctgggact	gatagaggat	60
ccggaactgc	agcccgctct	tttcagcctg	ttcctgtcca	tgtacttggg	caccatcctg	120
gggaacctgc	tcatectctt	ggctgtcatc	tctgactctc	acctccacac	ccccatgtac	180
ttcttctctt	ccaatctctc	ctttttggac	atttggttaa	gcacaaccac	gatcccaaag	240
atgctggtga	acatccaagc	tcagaatcgg	agcatcacgt	actcaggctg	cctcaccacg	300
atctgctttg	tcttggtttt	tgctggcttg	gaaaattgtc	tccttgacgc	aatggcctat	360
gaccgctatg	tgccattttg	tcacccctct	agatacacag	tcacatgaa	ccccgcctc	420
tgtggcctgc	tgattcttct	ctctctgttg	actagtgttg	tgaatgccct	tcttctcagc	480
ctgatgggtg	tgaggctgtc	cttctgcaca	gacctggaaa	tcccgtctct	cttctgtgaa	540
ctggctcagg	tcateccaact	cacctgttca	gacaccctca	tcaataacat	cctgatatat	600
tttgacagctt	gcataatttg	tggtgttctt	ctgtctggaa	tcattttgtc	ttacactcag	660
atcacctcct	gtgttttgag	aatgccatca	gcaagtggaa	agcacaagc	agtttccacc	720
tgtgggtctc	acctctccat	tgttctcttg	ttctatgggg	cagggttggg	gggtgacatt	780
agttctgtgg	ttactgactc	acctaggaag	gctgcagtgg	cttcagtgat	gtattctgtg	840
ttccctcaaa	tggtgaaccc	ctttatctat	agtctgagga	ataaggacat	gaaaggaacc	900
ttgaggaagt	tcatagggag	gataccttct	cttctgtgg			939

<210> 456

<211> 939

<212> DNA

<213> Unknown (H38g305 nucleotide)

<220>

<223> Synthetic construct

<400> 456

atggaaccaa	gaaaccaa	cagtgc	caattc	tcctggg	ctcagaaa	60
ccagagcagg	agacgctt	ctttcc	ttcttctg	tgtacctg	catggtcg	120
gggaacctgc	tcatcatc	ggccatc	atagactc	acctccac	ccccatgt	180
ttcttcc	ccaacctg	cctgggtg	ttctgtct	ccaccaac	catcccta	240
atgctggtga	gccttcaa	cgggagca	gccatctc	atccctg	cctgatcc	300
atgtacttct	tccatttct	tggcatcg	gacagcgt	taatcgcc	gatggctt	360
gaccggttcg	tggccatc	ccacccatt	cactacgc	agatcatg	cctacgcct	420
tgtcgcc	tggtcggc	cctctggg	tttctctg	tcattctc	cactcacat	480
ctcctgatgg	cccgtctc	tttctgcg	agccatgag	tgccctac	cttctgcg	540
ctcactccca	tcctccg	ttcgtgc	gacacctc	tgaatagg	cttcac	600
attgtggcag	ggatgggtg	agccacgc	tttgtctg	tcctggc	ctatgctc	660
atccttgtg	ccatcatga	ggtccctc	gcaggcgg	ggaagaa	cttctcc	720
tgcagctccc	acctgtct	ggttgctc	ttctatgg	ccaccatt	cgctatct	780
tgtccctc	cgtccctc	cactgtga	gagaaag	ctgcggtg	gtacacag	840
gtcaccccca	tgtgtaat	cttcattc	agcttgagg	acagagac	gaaagggg	900
ctcaggaag	tggtaacag	aaagatcac	tcattctc			939

<210> 457

<211> 295

<212> DNA

<213> Unknown (H38g306 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(295)

<223> n = A,T,C or G

<400> 457

atgtcagc	ccagtatc	ctcaacac	ccaacttc	tcttggtg	ggggattcca	60
ggcctggag	acctgcac	ctggatct	atcccttc	cagcatata	actggccctg	120
cttggaaact	gcactctc	tctcatc	caggctgat	cagccctcca	tgaacctatg	180
tacctcttc	tggccatgt	ggcagcc	gaccagct	ctatctc	agcactgccc	240
ccgggacaga	cgggtgatt	ggttcacg	tcngaaga	aaacccttg	ccggg	295

<210> 458

<211> 960

<212> DNA

<213> Unknown (H38g307 nucleotide)

<220>

<223> Synthetic construct

<400> 458

atgccatctg	cctctgcc	gatcattt	aacctgag	gttacaat	aggaccct	60
attctggtag	ggatccc	cctggagca	ttccatgt	ggattgga	tcccttct	120
atcatctaca	ttgtagct	tgtgggaa	tgcacctc	tctacctc	tgtgggtg	180
catagtcttc	atgaaccc	gttcttct	ctctccat	tgcccatg	tgacctcat	240
ttgtccacag	ctggtgtg	taaagcact	agtatctt	ggctaggg	tcgcgaa	300
acattcccag	gatgcctt	acaaatgt	ttccttca	ataacttt	cctggatt	360
gccattctga	tggccatg	atgtgatc	tatgtagc	tctgttct	cttgagat	420
accaccatct	tgactccca	gaccatcat	aagagtgc	tgggcatc	ctttcga	480
ttctgcatca	tcctgcc	tgtattct	ctgacatg	tgctttct	caggacac	540
atcatacccc	acacata	tgagcat	ggtgttgc	agctcgct	tgctgat	600
tccatcaact	tctggtat	cttttgtg	cccatcat	cggatcat	agatgtg	660

ctcattgctg	tttccctacgc	acacatcctc	tgtgctgtct	ttggccttcc	ctcccaagag	720
gcctgccaga	aagccctcgg	cacttggtgt	tctcatgtct	gtgtcctcct	catgttttat	780
acacctgcct	ttttctccat	cctcgcccat	cgctttggac	acaatgtctc	tgcaccttc	840
cacatcatgt	ttgccaatct	ctacattggt	atcccacctg	cactcaaccc	catgggttac	900
ggagtgaaga	ccaagcagat	cagagataag	gttatacttt	tgtttttctaa	gggtacagga	960

<210> 459

<211> 936

<212> DNA

<213> Unknown (H38g308 nucleotide)

<220>

<223> Synthetic construct

<400> 459

atgagcggga	caaaccagtc	gagtgtctcc	gagttcctcc	tcctgggact	ctccaggcag	60
ccccagcagc	agcatctcct	ctttgtgttc	ttcctcagca	tgtacctggc	cactgtcctg	120
gggaacctgc	tcatcatcct	gtccgtaagc	atagactcct	gcctgcacac	ccccatgtac	180
ttcttctcca	gcaacctgtc	ttttgtggac	atctgtctct	ccttcaccac	cgtccccaag	240
atgctggcca	atcacatact	cgagactcag	accatctcct	tctgtggctg	tctcacacag	300
atgtattttg	ttttcatggt	cgtggacatg	gacaatttcc	tcctagctgt	gatggcctat	360
gaccactttg	tcgcctgtg	ccacccctta	cattacacag	caaagatgac	ccatcagctc	420
tgtgccctgc	tggttgctgg	attatgggtg	gttgccaacc	tgaatgtcct	tctgcacacc	480
ctgctgatgg	ctccactctc	attctgtgca	gacaatgcca	tcactcactt	cttctgcgat	540
gtgactcccc	tactgaaact	ctcctgtcca	gacacacacc	tcaatgaggt	cataatcctt	600
agtgaggggt	ccctgggtcat	gatcacccca	tttctttgca	tcctggcttc	ttatatgcac	660
atcacctgca	ctgtcctgaa	ggccccatcc	acaaaagggaa	gggtggaaagc	cttctccacc	720
tgtgggtctc	acctggctgt	ggttctcctc	ttctacagca	ccatcattgc	tgtgtatttt	780
aacctctgt	cctcccactc	agctgagaaa	gacactatgg	ctactgtgtt	gtatacagta	840
gtgactccca	tgctaaaccc	tttcatctac	agcctgagga	acaggtactt	gaaaggggct	900
ctgaaaaaag	tagttggcag	gggtggtgtt	tctgtc			936

<210> 460

<211> 762

<212> DNA

<213> Unknown (H38g309 nucleotide)

<220>

<223> Synthetic construct

<400> 460

atgtacttct	tcctgcgcca	actctcagtg	gtggagctct	tctacaccac	tgacatcgtg	60
cccaggaccc	tgccaatct	gggtccccc	catccccagg	ccatctcttt	ccagggtgtg	120
gcagcccata	tgtacgtctt	cattgtcctg	ggcatctcgg	agtgtgcct	gctcactgcc	180
atggcctatg	accgatatgt	tgccatctgc	cagcccttac	gctattccac	cctcttgagc	240
ccacgggcct	gcatggccat	gggtgggtacc	tcctgggtca	caggcatcat	cacggccacc	300
acccatgcct	ccctcatctt	ctctctacct	tttcgcagcc	acccgatcat	cccgcacttt	360
ctctgtgaca	tcctgccagt	actgaggctg	gcaagtgtct	ggaagcacag	gagcgagatc	420
tcctgtatga	cagccaccat	agtcttcatt	atgatccctt	tctctctgat	tgtcacctct	480
tacatccgca	tcctgggtgc	catcctagca	atggcctcca	cccagagccg	ccgcaaggtc	540
ttctccacct	gctcctccca	tctgtctcgt	gtctctctct	tccttggaac	agccagcatc	600
acctacatcc	ggcgcaggc	aggctcctct	gttaccacag	accgcgtcct	cagtctcttc	660
tacacagtca	tcacacccat	gctcaacccc	atcatctaca	cccttcggaa	caaggacgtg	720
aggagggccc	tgcgacactt	ggtgaagagg	cagcgcccct	ca		762

<210> 461

<211> 998

<212> DNA

<213> Unknown (H38g310 nucleotide)

<220>

<223> Synthetic construct

<400> 461

atggatggag	agaatcactc	agtggatatct	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	tcagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggtggtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccccctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggaccc	ttgttgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taatttacc	ttctgtggcc	ctaagtgtt	ggacagcttc	tactgtgacc	540
ttctctagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tctaattctc	tacgtcttca	660
tcctgtttac	tgtttggaaa	cattcctcag	gtgggtcacc	caaggccctt	tccactcttt	720
cagctcacag	cacagcggtc	cttttgttct	ttgggtccacc	catgtttgtg	tatacatggc	780
cacaccctaa	ttcacagatg	gacaagtttc	tggctatatt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaca	gctagtgatt	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacaatga	tatggcctta	tgtttctttc	tttgatat			998

<210> 462

<211> 933

<212> DNA

<213> Unknown (H38g311 nucleotide)

<220>

<223> Synthetic construct

<400> 462

atggaagagt	acaacacatc	ctctacagac	ttcactttca	tggggctgtt	caacagaaaag	60
gaaacctcag	gtcttatttt	tgccatcacc	tctatcatct	tcttcaccgc	actgatggcc	120
aatgggggta	tgatcttcc	gatccaaaaca	gatttgcgcc	ttcatacacc	catgtacttc	180
ctctcagcc	acctttcctt	aattgacatg	atgtatat	ccactattgt	gcctaagatg	240
ctgggttaatt	acctgctgga	tcaaaggacc	atttcctttg	tgggggtgcac	agctcaacac	300
ttcctctacc	ttacccttgt	gggagctgaa	ttcttccctg	tgggcctcat	ggcctatgac	360
cgctatgtgg	ccatttgcaa	ccctctgaga	taccctgtcc	tcattgagccg	ccgggtctgt	420
tggatgatta	tagcaggttc	ctgggttggg	ggctctttgg	atggcttcc	cctaaccctc	480
atcaccatga	gctttccctt	ctgcaattcc	cgggagatta	accacttctt	ctgcgaggca	540
ccagcagtc	tgaagtggc	atgtgcagac	acagccctct	acgagacagt	gatgtatgtg	600
tgctgtgttt	tgatgctgct	gattccttct	tctgtagtcc	ttgcttctta	tgcccgaatc	660
ctgactacag	ttcagtgcac	gagctcagtg	gagggcagga	agaaggcatt	tgccacttgc	720
tcacccacac	tgactgtggt	gtccttgttc	tacggggctg	ccatgtacac	ctacatgctg	780
ccacattctt	accacaagcc	agcccaggac	aaagtcctct	ctgtgtttta	caccattctc	840
acacccatgc	tgaacccct	catctacagc	cttagaaaaca	aggatgtgac	tggagctctg	900
aagagggcct	tggggagggt	caagggctct	caa			933

<210> 463

<211> 883

<212> DNA

<213> Unknown (H38g312 nucleotide)

<220>

<223> Synthetic construct

<400> 463

atccaatgca	agggctaata	gaagtgaatt	aagacattct	ctgtaactcc	aatattaaat	60
ggaaaccggg	aaatagccag	attcctctcc	aacctgtcct	tggctggcat	cggtttcccc	120
tccaccatag	tctccaagat	gattgtggac	atccagctct	acagcagagt	catctcctat	180
gcgggctgcc	tgactcaggt	atctcttttt	gccgtttttg	gatgcattga	agacatgctt	240
ctgagtgtga	tggcttatga	ccggtttgtg	gacatctgtc	accctctgga	ttatccagtc	300

atcatgaacc	catgtttctg	tggttctcta	gttttggtgt	ctttttttct	cagtctttta	360
gactccagc	tgcacaattg	gattgcctta	caaattacct	gcttcaagga	tgtggaaatt	420
cccaatttct	tctgtgacc	ttctcaactc	ccccaccctt	gcctgttggt	acaccttcac	480
caatgacata	gtcatgtatt	tccttgctgc	catatttggt	ttcttccca	tttcggggcc	540
ttttctctta	ctataaaatt	gtttcctcca	ttctgagggt	ttcatcatca	ggtgggaagt	600
ataaagcctt	ctccacctgt	ggctctcacc	tgctagttgt	ttgcttattt	tatggaacag	660
gctttggagg	ggacctcagt	tcagacatgt	cctcttatcc	cagaaaaggt	gcagtggcct	720
cagtgatgta	cacggtggtt	actcccatgc	tgaaccatt	catttacagc	ctaacaggga	780
aattaaaagt	gcctgcggc	agctgcactg	cagaatagtc	taatctcatt	ttcttattat	840
ctgttccatt	ccttccgtag	tgtgagttag	aaaaggcagc	aag		883

<210> 464

<211> 942

<212> DNA

<213> Unknown (H38g313 nucleotide)

<220>

<223> Synthetic construct

<400> 464

atgaccctgg	gatccctggg	aaacagcagc	agcagcgttt	ctgctacctt	cctgctgagt	60
ggcatccctg	ggctggagcg	catgcacatc	tggatctcca	tcccaactgtg	cttcatgtat	120
ctggtttcca	tcccgggcaa	ctgcacaatt	ctttttatca	ttaaaacaga	gcgctcactt	180
catgaacctt	tgtatctctt	cctgtccatg	ctggctctga	ttgacctggg	tctctccctt	240
tgcactctcc	ctacagtcct	gggcatcttt	tgggttgagg	cacgagaaat	tagccatgat	300
gcctgctttg	ctcagctctt	tttcattcac	tgcttctcct	tctctgagtc	ctctgtgcta	360
ctgtctatgg	cctttgaccg	cctttgtggc	atctgccacc	ccttgcaacta	tgtttccatt	420
ctcaccaaca	cagtcattgg	caggattggc	ctggtctctc	tgggtcgtag	tgtagcactc	480
atttttccat	taccttttat	gctcaaaaaga	ttcccctatt	gtggctcccc	agttctctca	540
cattcttatt	gtctccacca	agaagtgatg	aaattggcct	gtgccgacat	gaaggccaac	600
agcatctacg	gcatgtttgt	catcgctctc	acagtgggta	tagactcact	gctcatcctc	660
ttctcttatg	ctctgatect	gcgcaccgtg	ctgtccatcg	cctccagggc	tgagagattc	720
aaggccctta	acacctgtgt	ttcccacatc	tgtgctgtgc	tgctcttcta	cactcccatg	780
attggcctct	ctgtcatcca	tcgctttgga	aagcaggcac	cccacctggg	ccagggtggc	840
atgggtttca	tgtatcttct	ctttcctcct	gtgatgaatc	ccattgtcta	cagtgtgaag	900
accaaacaga	tccgggatcg	agtgacgcac	gccttttgtt	ac		942

<210> 465

<211> 990

<212> DNA

<213> Unknown (H38g314 nucleotide)

<220>

<223> Synthetic construct

<400> 465

atgggactct	tcagacaatc	caaacatcca	atggccaata	tcacctggat	ggccaaccac	60
actggatggt	cggatttcat	cctgttggga	ctcttcagac	aatccaaaca	tccagcacta	120
ctttgtgtgg	tcatttttgt	ggttttcctg	atggcggtgt	ctggaaatgc	tgtcctgatc	180
cttctgatac	actgtgacgc	ccacctccac	acccccatgt	actttttcat	cagtcaattg	240
tctctcatgg	acatggcgta	catttctgtc	actgtgcccc	agatgctcct	ggaccaggtc	300
atgggtgtga	ataagatctc	agccccagag	tgtgggatgc	agatgttctt	ctacgtgaca	360
ctagcagggt	cagaattttt	ccttctagcc	accatggcct	atgaccgcta	cgtggccatc	420
tgccatcctc	tccgttaccc	tgctctcatg	aaccataggg	tgtgtctctt	cctgtcatca	480
ggctgctggt	tcctgggctc	agtggatggc	ttcacattca	ctcccatcac	catgaccttc	540
cccttccgtg	gatcccggga	gattcatcat	ttcttctgtg	aagttcctgc	tgtattgaat	600
ctctctgctg	cagacacctc	actctatgag	attttcatgt	acttgtgctg	tgtctcatg	660
ctcctcatcc	ctgtggtgat	catttcaagc	tcctatttac	tcactcctcct	caccatccac	720
gggatgaact	cagcagaggg	ccggaaaaag	gcctttgcca	cctgctcctc	ccacctgact	780
gtggtcatcc	tcttctatgg	ggctgccatc	tacacctaca	tgctccccag	ctcctaccac	840
acccttgaga	aggacatgat	ggtatctgtc	ttctatacca	tcctcactcc	agtgggtgaac	900

cctttaatct atagtccttag gaataaggat gtcattggggg ctctgaagaa aatgttaaca 960
gtggaacctg cctttcaaaa agctatggag 990

<210> 466

<211> 591

<212> DNA

<213> Unknown (H38g315 nucleotide)

<220>

<223> Synthetic construct

<400> 466

gctgccatgg	cttaagaccg	gtacatagca	atctgtaacc	cgctgctcta	tacagtgatt	60
atgtccaaga	agggttgttg	ccagcttgca	attggagcat	ttttgggggg	cactatgagc	120
tcaattattc	ataccacgaa	cactttccat	ctgtcattct	gctccagaga	tattaacctat	180
ttcttttgtg	atatctcccc	actcttctct	ctgtcctgca	ctgacacata	catgcatgac	240
atcattctgg	tggcttttgc	cagttttgtg	gaagcaatct	gtcttctatc	agttctcctt	300
tcttatgtct	tcattatggc	agctattctt	agaacagggt	ctgtggaggg	aagaagaaga	360
gggttctcca	cttgtgcttc	ccacctgact	gtggtcacta	tgtatcatgg	taccttgatc	420
ttcatttatt	tgcgtcccag	cactggccat	tcactggata	ttgacaaagt	gacctctgtg	480
ttctatactt	tgattatacc	tatgttgaac	cctctaattt	acagtctaag	gaacaaagat	540
gtcaaaaatg	cttttagaaa	agtgattggc	cgaaaattac	ttccttaagg	t	591

<210> 467

<211> 938

<212> DNA

<213> Unknown (H38g316 nucleotide)

<220>

<223> Synthetic construct

<400> 467

atgatgactc	ttaagaactg	cactgtgttt	actgacttta	tattcttagg	actttcaggt	60
acacaggata	tacagcaggg	gctctttgtg	cttttcttcc	tgatttatgg	cataactgtg	120
attgtcaatc	tagggatgat	cctactgatc	aagatggatc	tcagacttca	cacacccgtg	180
tattattttc	tgagcaattt	gtctttctgt	gatgtctgct	actcttccac	gtctctccca	240
aatgctagct	gatttcttat	cggaccaaaa	gtggattccg	tataatttat	gtgccattca	300
gatgtattta	tttggagtct	ttgcagatgt	ggaatgtctc	atgttggctg	tcatggccta	360
tgatcgttat	gttgccattt	gcaatccact	tctttatacg	atcactatgc	ccaggaggat	420
ctgcacccag	ctagtggctc	ttgcctatgt	tgtaggtttg	gtggattctg	caatccacac	480
ctgctgcaca	ttcagattgt	cattctgcaa	ttctaattgtc	atcaatcact	ttttctgtga	540
catccccc	ttgctagccc	tcaatccctac	tattaattgc	tattaatgag	atagtgatgt	600
tcacattcgt	tggctgtgtt	gcgggggtgca	gcattgtcac	tgtcttctc	tcctacagct	660
acatcataat	taccatcctt	aaaatgagct	cagctgaggg	cagacggaaa	gccttctcta	720
cctgcacctc	ccacttgatg	gccgtggctg	tatttcatgg	cacactcctg	ttcatgtatt	780
tcgacccag	ttcaagttac	tcaatggaaa	cagacaaaat	ggcctctgtt	ttctacacag	840
ttgtcatacc	tatgttaa	ccactgatct	acagcttaag	gaatagggat	gtgaaagggtg	900
ctctgaaaaa	agcaataagc	actaaattat	attctgtat			938

<210> 468

<211> 969

<212> DNA

<213> Unknown (H38g317 nucleotide)

<220>

<223> Synthetic construct

<400> 468

atgtcaacat	taccaactca	gatagccccc	aatagcagca	cttcaatggc	ccccaccttc	60
ttgctgggtg	gcatgccagg	cctatcaggt	gcacctcct	ggtggacatt	gccccctatt	120
gctgtctacc	ttctctctgc	actgggaaat	ggcaccatcc	tctggatcat	tgccctgcag	180

cccgccctgc	accgcccgaat	gcactttcttc	ctctttcttgc	ttagtggtgc	tgatattgga	240
ttgggtcactg	ccctgatgcc	cacactgctg	ggcatcgccc	ttgctgggtgc	tcacactgtc	300
cctgcctcag	cctgccttct	acagatgggt	tttatccatg	tcttttctgt	catggagtcc	360
tctgtcttgc	tcgccatgtc	cattgatcgg	gcactggcca	tctgccgacc	tctccactac	420
ccagcgctcc	tcaccaatgg	tgtaattagc	aaaatcagcc	tggccatttc	ttttcgatgc	480
ctgggtctcc	atctgcccct	gccattcctg	ctggcctaca	tgccctactg	cctccccacag	540
gtcctaacc	attcttattg	cttgcaccca	gatgtggctc	gtttggcctg	cccagaagct	600
tgggtgcag	cctacagcct	atttgtggtt	ctttcagcca	tgggtttgga	ccccctgctt	660
attttcttct	cctatggcct	gattggcaag	gtgttgcaag	gtgtggagtc	cagagaggat	720
cgctggaagg	ctggtcaaac	ctgtgctgcc	cacctctctg	cagtgtcctt	cttctatata	780
cctatgatcc	tcttggcact	gattaacccat	cctgagctgc	caatcactca	gcatacccat	840
actcttctat	cctatgtcca	tttcttctt	cctccattga	taaacctat	tctctatagt	900
gtcaagatga	aggagattag	aaagagaata	ctcaacaggt	tgcagcccag	gaaggtgggt	960
ggtgctcag						969

<210> 469

<211> 384

<212> DNA

<213> Unknown (H38g318 nucleotide)

<220>

<223> Synthetic construct

<400> 469

tctcgctcag	atacacaggt	caatgagtta	gtgttattca	ccgtcttttg	ttttattgaa	60
ctgagtacca	tttcaggagt	tttcatttct	tattgttata	tcatectatc	agtcttggag	120
atacactctg	ctgaggggag	gttcaaagct	ctctctacat	gcacttccca	cttatctgcg	180
gttgcaattt	tccaggggag	tctgctcttt	atgtatttcc	ggccaagtcc	ttcctattct	240
ctagatcaag	ataaaatgac	ctcattgttt	tacacccttg	tggttcccat	gttgaacccc	300
ctgatttata	gcctgaggaa	caaggatgtg	aaagaggccc	tgaaaaaact	gaaaaataaa	360
attttatattt	aaggaaatag	taaa				384

<210> 470

<211> 946

<212> DNA

<213> Unknown (H38g319 nucleotide)

<220>

<223> Synthetic construct

<400> 470

atgtttctgc	tcaataacctc	agaagttgaa	gtctccacat	tcctattgat	tgggatacca	60
ggacttgagc	atgcacacat	ttggatctct	atccccatct	gccttatgta	cctcatggcc	120
atcctgggca	actgcacccat	cctatttggt	atcagaacag	agcattccct	gcaagagccc	180
atgtactatt	tctcttccat	gctggccctg	tccgacctgg	gcctgtcttt	ctcctcccta	240
cccacgatgc	tgagaatctt	cttggttcaac	aacatgggga	tttctgctga	tacatgcatt	300
gcccaggaat	tcttcatcca	tggattcaca	gacatggagt	cttcagttct	cctaatacatg	360
tcctttgatc	acttagtagc	catttgcaac	cccctaagat	atagctctat	tctcaccagc	420
ttcagggttt	tgcaaattgg	actggctttt	gccattaaaa	gcattctcct	agtgttacct	480
cttttacttt	aaagagactc	agatactgta	ataaacacct	tttatccac	tcctactgcc	540
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ctgtgtgtct	catatctgtg	ctgtactcgt	cttctatgtg	cccatcatca	ccttggctac	780
catgcgtcgc	tttgctaagc	ataaatcccc	tttagctatg	attctgatag	cagatgcatt	840
cttgctggta	ccacccttga	tgaatcccat	tgtgtattgt	gtaaaaactc	ggcagattag	900
agtaaaggtc	ctggaaaaat	tggctctgaa	gcctaaatga	tggggc		946

<210> 471

<211> 942

<212> DNA

<213> Unknown (H38g320 nucleotide)

<220>

<223> Synthetic construct

<400> 471

atgatggcat	ctgaaagaaa	tcaaagcagc	acacccactt	ttattctctt	gggtttttca	60
gaataccag	aaatccaggt	tccactcttt	ctgggtttct	tggtcgtcta	cacagtcact	120
gtagtgggga	acttgggcat	gataataatc	atcagactca	attcaaaact	ccatacaatc	180
atgtgctttt	tccttagtca	cttgccttg	acagacttct	gtttttccac	tgtagttaca	240
cctaaactgt	tggagaactt	ggttgtggaa	tacagaacca	tctctttctc	tggttgcatc	300
atgcaatttt	gttttgcttg	catttttgga	gtgacagaaa	ctttcatgtt	agcagcgatg	360
gcttatgacc	gttttggtgc	agtttgtaaa	cccttgctgt	ataccactat	tatgtctcag	420
aagctctgtg	ctcttctggt	ggctgggtcc	tatacatggg	ggatagtgtg	ctccctgata	480
ctcacatatt	ttcttcttga	cttatcgttt	tgtgaatcta	ccttcataaa	taattttatc	540
tgtgaccact	ctgtaattgt	ttctgcctcc	tactcagacc	cctatatcag	ccagaggcta	600
tgctttatta	ttgccatatt	caatgaggtg	agcagcctaa	ttatcattct	gacatcatat	660
atgcttattt	tcactaccat	tatgaagatg	cgatctgcaa	gtgggcgcca	gaaaactttc	720
tccacctgtg	cctcccacct	gacagccatc	atctatctcc	atggaactat	ccttttctct	780
tactgtgttc	ctaactctaa	aactttctagc	ctcatagtta	cagtggcttc	tgtgttttac	840
acagtggcga	ttccaatgct	gaaccatttg	atctacagcc	ttaggaacaa	agatatcaat	900
aacatgtttg	aaaaattagt	tgtcaccaaa	ttgatttacc	ac		942

<210> 472

<211> 965

<212> DNA

<213> Unknown (H38g321 nucleotide)

<220>

<223> Synthetic construct

<400> 472

cacacagagc	cacggaatca	cacaggggtc	tgagaatttc	tctctctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggc	120
acgggtgctga	ggaacctgct	cagcatcctg	gctgtccgct	ctgactcccc	cctccacaac	180
cccattgtact	tcttctctc	caacctgtgc	tgggctgaca	tcggtttcac	ctcggccacg	240
gttgccaaga	tgattgtgga	atgcagtcgc	atagcagagt	catctctcat	gcgggctgcc	300
tgacgcagat	gtctttcttg	gtcctttttg	catgtataga	aggcatgctc	ctgactgtga	360
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actataaaat	cgtcccctcc	attctaagga	tttcatcatc	agatgggaag	tataaagcct	720
tcgccacctg	tggctctcac	ctagcagttg	tttgctgatt	tgatggaaca	ggcattggta	780
tgtacctgac	ttcagctgtg	gcaccacccc	ctaggaatgg	agtgggtggc	tcagtgatgt	840
aggctgtggt	cacccccatg	ctgaaccttt	tcacttacag	cctgagaaac	agggacatac	900
aaagtgcctt	gcggaggctg	ctcagcagaa	cagtcgaatt	tcatgatctg	tttcattctt	960
tttct						965

<210> 473

<211> 990

<212> DNA

<213> Unknown (H38g322 nucleotide)

<220>

<223> Synthetic construct

<400> 473

atgtcgggtc	tcaataatac	cattgctgag	cctctgatct	tctctctgat	gggcattcca	60
ggcctgaaag	ccaccacagta	ctggatctcc	atcccttttt	gtctcttata	tggtgttgcc	120

gtctctggaa	atagcatgat	cctgtttgtg	gtcctctgtg	aacggagcct	ccataagcct	180
atgtactatt	tcctctctat	gctttcagcc	acagacctga	gcttgtccct	gtgtacactt	240
tctactaccc	ttggtgtctt	ctggtttgaa	gcccagagaa	tcaacctaaa	tgctgcatt	300
gcccagatgt	tctttctaca	cggatttact	ttcatggagt	ctggggttct	actggccatg	360
gcctttgate	gttttgtggc	catctgttac	ccactgagat	acactaccat	ccttaccaat	420
gcccgaattg	ccaagattgg	gatgagcatg	ttgataagaa	atgttgccgt	catgttgcca	480
gtcatgctct	ttgtcaagag	gttgctcctc	tgcagttcta	tggtcctttc	acattcttac	540
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ggtctgtttg	cgcttttgtc	cactacaggg	tttgactgcc	cttgcatcct	gctctcctat	660
atcctgatca	ttcgatctgt	cctcagcatt	gcttcctcag	aagagaggcg	gaaagccttc	720
aacacctgca	catcccacat	cagtgtctgt	tccatcttct	acctccctct	catcagtttg	780
tctcttgtcc	atcgctatgg	ccattcagca	cctccatttg	tccacatcat	catggccaat	840
gtctttctgc	taatccctcc	tgtgtcaac	cctattattt	acagtgtaaa	gattaagcag	900
attcaaaagg	ccattatcaa	ggtcttaatt	cagaagcact	ccaaatctaa	tcacagcta	960
tttctgatta	gagataaagc	catttatgaa				990

<210> 474

<211> 942

<212> DNA

<213> Unknown (H38g323 nucleotide)

<220>

<223> Synthetic construct

<400> 474

atgatgatgg	ttttaaggaa	tctgagcatg	gagcccacct	ttgccctttt	aggtttcaca	60
gattacccaa	agcttcagat	tcctctcttc	cttgtgtttc	tgctcatgta	tgttatcaca	120
gtggtaggaa	accttgggat	gatcataata	atcaagatta	accccaaatt	tcacactcct	180
atgtactttt	tccttagtca	cctctctttt	gttgattttt	gttactcttc	cattgtcact	240
cccaagctgc	ttgagaactt	ggtaatggca	gataaaagca	tcttctactt	tagctgcatg	300
atgcagtact	tcctgtcctg	cactgctgtg	gtgacagagt	ctttcttgct	ggcagtgatg	360
gcctatgacc	gctttgtggc	catctgcaat	cctctgcttt	atacagtggc	catgtcacag	420
aggctctgtg	ccctgctggg	ggctgggtca	tatctctggg	gcatgtttgg	ccccttggtta	480
ctcctttgtt	atgctctccg	gttaaacttc	tctggacctt	atgtaatcaa	ccacttcttt	540
tgtgagtata	ctgctctcat	ctctgtgtct	ggctctgata	tactcatccc	ccacctgctg	600
cttttcagct	tcgccacctt	caatgagatg	tgtacactac	tgatcatcct	cacttccctat	660
gttttcattt	ttgtgactgt	actaaaaatc	cgttctgtta	gtgggcgcca	caaagccttc	720
tccactgggg	cctccacctt	gactgctatc	accatcttcc	atgggacctt	ccttttctct	780
tactgtgtac	ccaactccaa	aaactctcgg	caaacagtca	aagtggcctc	tgtattttac	840
acagttgtca	accccatgct	gaacctctcg	atctacagcc	taaggaataa	agacgtgaag	900
gatgctttct	ggaagttaat	acatacacaa	gttccatttc	ac		942

<210> 475

<211> 942

<212> DNA

<213> Unknown (H38g324 nucleotide)

<220>

<223> Synthetic construct

<400> 475

atgggtgctgg	cttcagggaa	cagctcttct	catcctgtgt	ccttcacact	gcttgggaatc	60
ccaggcctgg	agagtttcca	gttgtggatt	gcctttccgt	tctgtgccac	gtatgctgtg	120
gctgttggtg	gaaatatcac	tctcctccat	gtaatcagaa	ttgaccacac	cctgcatgag	180
cccatgtacc	tctttctggc	catgctggcc	atcactgacc	tggtcctctc	ctcctccact	240
caacctaaaga	tgttggccat	attctggttt	catgctcatg	agattcagta	ccatgcctgc	300
ctcatccagg	tgttcttcat	ccatgccttt	tcttctgtgg	agtctggggg	gtcatgggt	360
atggccctgg	actgctacgt	ggctacctgc	ttcccactcc	gacactctag	catcctgacc	420
ccatcggtcg	tgatcaaact	ggggaccatc	gtgatgctga	gagggtgct	gtgggtgagc	480
cccttctgct	tcattggtgc	taggatgccc	ttctgccaac	accaagccat	tcccagctca	540
tactgtgagc	acatggctgt	gctgaagttg	gtgtgtgctg	atacaagcat	aagtcgtggg	600

tatgggctct	ttgtggcctt	ctctgtggct	ggctttgata	tgattgtcat	tggtatgtca	660
tacgtgatga	ttttgagagc	tgtgcttcag	ttgccctcag	gtgaagcccg	cctcaaagct	720
tttagcacac	gtgcctccca	tatctgtgtc	atcttggctc	tttatatccc	agcccttttt	780
tctttcctca	cctaccgctt	tggccatgat	gtgccccgag	ttgtacacat	cctgtttgct	840
aatctctatc	tactgatacc	tcccatgctc	aaccccatca	tttatggagt	tagaaccaaa	900
cagatcgggg	acagggttat	ccaaggatgt	tgtggaaaca	tc		942

<210> 476

<211> 860

<212> DNA

<213> Unknown (H38g325 nucleotide)

<220>

<223> Synthetic construct

<400> 476

tatatattgt	tagacatata	tatatgtcta	aacaacactc	atgtctaatt	gtgtgtagag	60
tcactagagg	caattttaaaa	taagttttta	ttttcttttt	tttctattgg	caataacatg	120
atttttagtga	taaatttttaa	taattatgaa	aacataacag	tacttttttaa	aacataaaca	180
tttaaagaaa	aagttttcat	gattcttgta	tacatcttaa	catacatact	ctccctttta	240
agtaagttct	ttgcattggt	taaatctttg	cagacaaagc	tttcaagag	caagtcagtg	300
gaaactagta	gagcaggagt	tgagaaagcc	ctgtgcatta	tacactcacc	atgtcccaga	360
agttttgctc	catccatcca	gcaggatggt	agaccagggc	atataatcta	tccccggtea	420
ctcattttct	cattgtattg	cctattgtgg	gcacaatgta	gttaatatat	tttaaaataa	480
atattctgtt	gccatttcag	attcgtgagt	tcactctggat	agcggatttt	tgtttggttg	540
tttgttttgc	tttagtcaat	tttgattaat	taaggaatct	cagagtcctc	actccttagc	600
tttcattttc	aacttgtcta	aaaggcactt	tctgccagtg	cacatcaacc	ttctccaccc	660
atttcccaca	tttccaccat	ccttcctcac	tctagtgcac	taactccaaa	aactcacagg	720
caactgtgaa	agcacactct	gtatgttatg	ccatgttaat	ccccatgctg	aactcacaga	780
cttgtagcat	gcggtacaaa	aatgtgaatg	aatctctgca	gaagctgatg	gacttcaaaa	840
tatttttagca	ttgaaagcaa					860

<210> 477

<211> 966

<212> DNA

<213> Unknown (H38g326 nucleotide)

<220>

<223> Synthetic construct

<400> 477

agtcacacag	agccatagaa	tctcacaagt	gtctcagaat	tcctttctcca	gggactctca	60
gaggatccag	aactgcagcc	cgctcctcgt	gggctgtccc	tgtccatgta	cctgggtcacg	120
gtgctgagga	acctgctcat	catcctgggt	gtcagctctg	actcccacct	ccacaccccc	180
atgtacttct	tcctctccaa	cctctcctgg	gctgacattg	gtttcacctc	ggccatgggt	240
cccaagatga	ttgtggacat	gcagtcgcat	agcagagtca	tctcttaagc	gggctgcttg	300
acacagatgt	ctttctttgt	cctttttgca	tgtatagaag	acatgtcctc	gactgtgatg	360
gcctatgacc	aatttggtgg	catctgtcac	ccctgcacta	cccagtcac	atgaatcctc	420
acctctgtgt	cttcttagtt	ttggtttctt	ttttccttag	cctgttggat	tcccagctgc	480
acagttggat	tgtgttacaa	ttcaccttct	tcaagaatgt	ggaaatctct	aattttttct	540
gtgatccatc	tcaacttctc	aaaccttgct	gttctgacgg	catcatcaat	agcatattta	600
tatatattaga	tagtattctg	ttcagttttc	ttcccatttc	agggatcctt	ttgtcttact	660
ataaaaattgt	cccctccatt	ctaagaattt	catcgtcaga	tgggaagtat	aaagccttct	720
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acctaacttc	agctgtgtca	ccacccccag	gaatgggtgtg	gtggcgtcag	tgatgtatgc	840
tgtgggcacc	cccatgctga	actcttttat	ctacagcctg	agaaacaggg	acattcaaag	900
cgccctgtgg	aggctgcgca	gcagaacagt	cgaatctcat	gatctgttcc	atccttattc	960
tttgtgt						966

<210> 478

<211> 951

<212> DNA

<213> Unknown (H38g327 nucleotide)

<220>

<223> Synthetic construct

<400> 478

atgcaaccat	ataccaaaaa	ctggaccag	gtaactgaat	ttgtcatgat	gggctttgct	60
ggcatccatg	aagcacacct	cctcttcttc	atactcttcc	tcaccatgta	cctgttcacc	120
ttgggtggaga	atttggccat	catttttagtg	gtgggttttg	accaccgact	acggagaccc	180
atgtatttct	tctgacaca	cttgtcctgc	cttgaaatct	ggtacacttc	tgttacagt	240
cccaagatgc	tggctgggtt	tattgggggtg	gatgggtggca	agaatatctc	ttatgctggt	300
tgccatcccc	agctcttcat	cttcaccttt	cttggggcaa	ctgagtgttt	cctactggct	360
gccatggcct	atgatcggtta	tgtggccatt	tgtatgcctc	tccactatgg	ggcttttgtg	420
tccctggggca	cctgcatccg	tctggcagct	gcctgttggc	tggtaggttt	cctcacaccc	480
atcttgccaa	tctacctctt	gtctcagcta	acattttgtg	gcccaaagt	cattgaccat	540
ttctcctgtg	atgcctcacc	cttgctagcc	ttgtcgtgct	cagatgtcac	ttggaaggag	600
actgtggatt	tccgtgtgtc	tctggctgtg	ctactggcct	cctctatggt	cattgctgtg	660
tccatgggca	acatcgtctg	gacactgctg	cacatccgct	cagctgctga	gcgctggaag	720
gccttctcta	cctgtgcagc	tcacctgact	gtgggtgagcc	tcttctatgg	cactcttttc	780
tttatgtatg	tccagaccaa	ggtgacctcc	tccatcaact	tcaacaaggt	ggtatctgtc	840
ttctactctg	ttgtcacgcc	catgctcaat	cctctcatct	acagtcttag	gaacaaggaa	900
gtgaagggag	ctctgggtcg	agtcttttct	ctcaactttt	ggaagggaca	g	951

<210> 479

<211> 936

<212> DNA

<213> Unknown (H38g328 nucleotide)

<220>

<223> Synthetic construct

<400> 479

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tgggagatcc	agctcctcct	cctagtgttt	tccctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcatttgtgt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctacttg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcgt	tgggtgggtg	gagatgggtgc	tgtcatagc	catggccttt	360
gacagatatg	tggccctatg	taagcccctc	cactatctga	ccattatgag	cccaagaatg	420
tgcccttcat	ttctggctgt	tgccctggacc	cttgggtgtca	gtcactccct	gttccaactg	480
gcattttctg	ttaatttacc	cttctgtggc	cctaagtgtg	tggacagctt	ctactgtgac	540
cttccctcagc	ttctcagact	agcctgtacc	gacacctaca	gattgcagtt	catgggtcact	600
gttaacagtg	ggtttatctg	tgtgggtact	ttcttcatac	ttctaacttc	ctacatcttc	660
atcctgttta	ctgtttggaa	acattcctca	ggtgggtcat	ccaaggccct	ttccactctt	720
tcagctcaca	gcacagcggg	ccttttggtc	tttgggtccac	ccatgtttgt	gtatacatgg	780
ccacacccta	attcacagat	ggacaagttt	ctggctatct	ttgatgcagt	tctcactcct	840
tttctgaatc	cagttgtcta	tacattcagg	aataaggaga	tgaaggcagc	aataaagaga	900
gtatgcaaac	agctagtgtat	ttacaagaag	atctca			936

<210> 480

<211> 668

<212> DNA

<213> Unknown (H38g329 nucleotide)

<220>

<223> Synthetic construct

<400> 480

gtgaggcacc	ccctgcgatg	cggaagtaa	gagccagccc	ctctcccacc	cctgggtctt	60
aggaacccca	tcatgacctc	gtgtttctgt	ggctttctag	ttttgtcttt	ttttttttt	120

ttctcagtc	tttagacgcc	cagctgcaca	acttgattgc	cttacaaatg	acctgcttcc	180
aggatgcgga	aattcctagt	ttcttctgtg	acccttctca	actccccc	cttgcatgtt	240
gtgacacctt	caccaataac	ataatcatgt	atttgccctg	tgccataatt	ggttttcttc	300
ccatctcggg	gacctttt	tcttactata	aaattgtt	ctccattctg	agggtttcat	360
catcacgtgg	gaagtataag	gccttctcca	cctgtgggtc	tcacctgtca	gttggttgc	420
gattttacgg	aacaggctt	ggagggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	480
aggctgcagt	ggcctcagtg	atgtacacgg	tgatcacctc	catgctgaac	cccttcatct	540
acagcctgag	aaacagggat	attaaaggtg	tcctgcggca	gccgcacggc	agcaccgtcc	600
aatttcagta	tcttcttatt	tgttccattc	cttttgtagt	gtgggttaaa	aaaggcagca	660
aggtcaaa						668

<210> 481

<211> 840

<212> DNA

<213> Unknown (H38g330 nucleotide)

<220>

<223> Synthetic construct

<400> 481

atgtacctgg	tcacggtgct	gaggaacctg	ctcatcatcc	tggtgtgcag	ctctgactcc	60
cacctccaca	cccccatgtg	cttcttctc	tccaacctgt	gctgggctga	catcggttcc	120
acctcgcca	tggttcccaa	gatgattgtg	gacatgcagt	cgcatagcag	agtcattctc	180
tatgcgggct	gcctgacaca	gatgtctt	tttgtctt	ttgcatgtat	agaagacatg	240
ctcctgacag	tgatggccta	tgaccgattt	gtggccatct	gtcacccct	gcactacca	300
gtcatcatga	atcctcacct	tggtgtct	ttagttttgg	tgctctttt	cctcagcctg	360
ttggattccc	agctgcacag	ttggattgtg	ttacaattca	ccttcttcaa	gaatgtggaa	420
atctccaatt	ttgtctgtga	cccatctcaa	cttctcaacc	ttgcctgttc	tgacagtgtc	480
atcaatagca	tattcatata	tttagatagt	attatgtttg	gttttcttcc	catttcaggg	540
atccttttgt	cttacgctaa	caatgtcccc	tccattctaa	gaatttcate	atcagatagg	600
aagtctaaag	ccttctccac	ctgtggtct	cacctggcag	ttgtttgctt	attttatgga	660
acaggcattg	gcgtgtacct	gaacttcagct	gtgtcaccac	cccccaggaa	tggtgtgggtg	720
gcacagtgga	tgtacgctgt	ggtcaccccc	atgctgaacc	ctttcatcta	cagcctgaga	780
aatagggaca	ttcaaagtgc	cctgtggagg	ctgcgcagca	gaacagtcga	atctcatgat	840

<210> 482

<211> 924

<212> DNA

<213> Unknown (H38g331 nucleotide)

<220>

<223> Synthetic construct

<400> 482

atggaaacac	agaacctcac	agtggtgaca	gaattcattc	ttcttggctc	gacctcagtc	60
caagatgctc	aacttctggg	ctttgtgcta	gtcttaattt	tctaccttat	catcctccct	120
ggaaatttcc	tcatcatttt	caccataaag	tcagacctg	ggctcacagc	ccccctctat	180
ttctttctgg	gcaacttggc	cttactggat	gcacctact	ccttcattgt	ggttcccagg	240
atgttgggtg	acttctctc	tgagaagaag	gtaatctcct	atagaagctg	catcactcag	300
ctctttttct	tgcattttct	tgagcgggga	gagatgttcc	tcctcgttgt	gatggcctt	360
gaccgctaca	tcgccatctg	ccggccttta	cactattcaa	ccatcatgaa	ccctagagcc	420
tgctatgcat	tatcgttggg	tctgtggctt	gggggcttta	tccattccat	tgtacaagta	480
gcccttatcc	tgcacttgcc	tttctgtggc	ccaaaccagc	tcgataactt	cttctgtgat	540
gttccacagg	tcatcaagct	ggcctgcacc	aatacctttg	tggtggagct	tctgatgggtc	600
tccaacagtg	gcctgctcag	cctcctgtgc	ttcctgggcc	ttctggcctc	ctatgcagtc	660
atcctctgtc	gtataaggga	gcactcctct	gaaggaaaga	gcaaggctat	ttccacatgc	720
accacccata	ttatcattat	atttctcatg	tttggaacctg	ctattttcat	ctacacttgc	780
cccttccagg	ctttccagc	tgacaaggta	gtttctctt	tccatactgt	catctttcct	840
ttgatgaacc	ctgtatttta	tacgcttcgc	aaccaggagg	tgaaagcttc	catgaggaag	900
ttgttaagtc	aacatatgtt	ttgc				924

<210> 483
 <211> 457
 <212> DNA
 <213> Unknown (H38g332 nucleotide)

<220>
 <223> Synthetic construct

<400> 483
 gggatgagaa aggaacaagc tgtctgtggt agtcatccat gattgagatg atgtgtggac 60
 cctgagtcag actacctggt tcaaattgcag gctctctact ttttaccat ttgatcttgg 120
 cctgtggctc tctacttctt atccatttca tcttggactt gtggcctctc atacctcatc 180
 ttccttacag tctccatat gaaatcccc taaagtagga acaaagcttt ggccaactgc 240
 tctcccatc tttccgtggt ctttacttag gaactgtgtg tttaatatac gtgacacagg 300
 gtttctccca catccctgag cagaaacaag ctgtgtctgt attttgcact gtactcaccc 360
 ccatgctaaa cccctcatc tacatcctga gaaacaagga tgtggtgggg ctcttcagaa 420
 agttctggga acacatcaag tctctaaaca gaacaca 457

<210> 484
 <211> 972
 <212> DNA
 <213> Unknown (H38g333 nucleotide)

<220>
 <223> Synthetic construct

<400> 484
 atgtctttct tctttgtaga ctttaagacc atgaacaggt cagcaacaca catcgtgaca 60
 gagttttatt tcttgggatt ccttgggtgc tggaagattc agattttcct cttctcattg 120
 tttttggtag tttatgtctt gaccttgctg ggaaatggag ccatcatcta tgcagtgaga 180
 tgcaaccac tactacacac ccccatgtac tttctgctgg gaaattttgc ctctcttgag 240
 atctggatg tgtcctccac tattcctaac atgctagtca acattctctc caagaccaag 300
 gccatctcat tttctgggtg ctctctccag ttctatttct tcttttact gggaacaact 360
 gaatgtctct tttctggcagt aatggcttat gatcgatacc tggccatctg ccaccactg 420
 cagtaccctg ccatcatgac tgtaagggtc tgttgtaagc tgggtgtctt ctgttggctt 480
 attggattcc ttggataccc aattcccatt ttctacatc cccaactccc cttctgtggt 540
 cctaatatca ttgatcactt cctgtgtgac atggacccat tgatggctct atcctgtgcc 600
 ccagctccca taactgaatg tattttctat actcagagct cccttgtctt ctttttact 660
 agtatgtaca ttcttcgac ctatatcctg ttactaacag ctgtttttca ggtcccttct 720
 gcagctgggc ggagaaaagc cttctctacc tgtggttctc atttggttgt ggtatctctt 780
 ttctatggga cagtcattgt aatgtatgta agtcctacat atgggatccc aactttattg 840
 cagaagatcc tcacactggt atattcagta acgactctc tttttaatcc tctgatctat 900
 actcttcgta ataaggacat gaaactcgct ctgagaaatg tcctgttttg aatgagaatt 960
 cgtcaaaatt cg 972

<210> 485
 <211> 945
 <212> DNA
 <213> Unknown (H38g334 nucleotide)

<220>
 <223> Synthetic construct

<400> 485
 atggccaaca tcaccaggat ggccaaccac actggaaagt tggatttcat cctcatggga 60
 ctcttcagac gatccaaaca tccagctcta cttagtgtgg tcatctttgt ggttttcttg 120
 aaggcgttgt ctggaaatgc tgtcctgac cttctgatac actgtgacgc ccacctccac 180
 agccccagt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
 actgtgcccc agatgtcctt ggaccaggtc atgggtgtga ataaggctc agccccgtgag 300
 tgtgggatgc agatgttctt ctatctgaca ctagcaggtt cggaattttt ccttctagcc 360
 accatggcct atgaccgcta cgtggccatc tgccatcctc tccgttacct tgtcctcatg 420

aaccataggg	tctgtctttt	cctggcatcg	ggctgctggt	tcttgggctc	agtggatggc	480
ttcatgctca	ctcccatcac	catgagcttc	cccttctgca	gatcctggga	gattcatcat	540
ttcttctgtg	aagtccctgc	tgtaacgatc	ctgtcctgct	cagacacctc	actctatgag	600
accctcatgt	acctatgctg	tgtcctcatg	ctcctcatcc	ctgtgacgat	catttcaagc	660
tcctatttac	tcatectcct	caccgtccac	aggatgaact	cagcagaggg	ccggaaaaag	720
gcctttgcca	cctgctcctc	ccacctgact	gtggctcatcc	tcttctatgg	ggctgccgtc	780
tacacctaca	tgctccccag	ctcctaccac	acccttgaga	aggacatgat	ggatatctgtc	840
ttctatacca	tcctcactcc	ggtgctgaac	cctttaatct	atagtcttag	gaataaggat	900
gtcatggggg	ctctgaagaa	aatgttaact	gtgagattcg	tcctt		945

<210> 486

<211> 759

<212> DNA

<213> Unknown (H38g335 nucleotide)

<220>

<223> Synthetic construct

<400> 486

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gattatctca	tgggcgaggg	gaccatctct	ttcatcgctt	gcactgctca	gtgctttctc	120
tacatgggct	ttatgggggc	tgaattcttc	ctgctggggc	tcattggccta	tgaccgctac	180
gtggccatct	gcaacccact	gcgctatect	gtcctcatca	gctggcgggg	ctgctggatg	240
atcctggcca	gctcttgggt	cgggtggggc	ttggacagtt	ttctcctcac	ccccattacc	300
atgagtctcc	cggtctgtgc	ctctcaccaa	atcaatcact	ttttctgtga	ggcaccacc	360
atgctgaggg	tggcctgtgg	ggacaaaacc	acctatgaaa	cagtgatgta	tgtgtgctgc	420
gttgcaatgc	tgctgatccc	cttctcggtg	gtgactgcat	cctacaccag	gattctcatc	480
acagtgcac	agatgacatc	ggctgaaggg	aggaagaagg	cctttgccac	ctgctcttca	540
cacatgatgg	tggtgacatt	gttctatggg	gctgccttgt	atacgtatac	gcttccccaa	600
tcttaccaca	ccccaatcaa	agataagggt	ttctctgcct	tttataccat	cctcacaccc	660
ttattaaacc	ctctcatcta	cagtctgagg	aacagggatg	tgatgggtgc	cttgaagaga	720
gttgtggcaa	gatgttaggg	gacatgtggg	gtgatgagg			759

<210> 487

<211> 857

<212> DNA

<213> Unknown (H38g336 nucleotide)

<220>

<223> Synthetic construct

<400> 487

gtttttctccc	gcacccgggt	tgcctcaat	tgcaaacgca	tattctgggt	aacgccagtc	60
ttttttttgt	ccccctcatg	cccattctct	atcgagtggt	ctaagagtgc	agtcagcttc	120
gtgtcacaga	gcaggcgcat	tagatttttg	ggctgtgaca	ttcaaacggg	atgtgttctt	180
gggcccctgg	gggaactgaa	gcccttctct	ttggttttat	gtcttatgat	cgctatgtag	240
ctatctgtca	ccctttacat	tatectatgc	ttatgagcaa	gaagatctgc	tgcctcatgg	300
ttgcatgtgc	atggggcagt	ggttctatca	atgctttcat	acatacattg	tatgtgtttc	360
agcttccatt	ctgtaggtct	cggctcatta	accacttttt	ctgtgaagtt	ccagctctac	420
tatcattggg	gtgtcaggac	acctcccagt	atgagtatac	agtcctcctg	agtggactta	480
ttatcttget	actaccattc	ctagccattc	tggcttccta	tgctcgtgtg	cttattgtgg	540
tattccagat	gagctcagga	aaaggacagg	caaaagctgt	ttccacttgt	tcctccacc	600
tgattgtggc	aagcctgttc	tatgcaacca	ctctctttac	ctacacaagg	ccacactcct	660
tgcgttcccc	ttcacgggat	aaggcggtgg	cagtatttta	caccattgtc	acacctctac	720
tgaacccatt	tatctacagc	ctgagaaata	aggaagtgc	gggggcagtg	aggagactgt	780
tgggatattg	gatatgctgt	agaaaatatg	acttcagatc	tctgtattga	ttgagcatta	840
acaacataaa	aagctgt					857

<210> 488

<211> 812

<212> DNA

<213> Unknown (H38g337 nucleotide)

<220>

<223> Synthetic construct

<400> 488

agaagggaca	ttttctat	tttgccttcatt	tgtagctatt	catgactgac	tctccgttct	60
tttgtctact	tggtcatccg	tccatccatc	catccatcca	tccactcagc	cattcttttg	120
ttcaacagtg	atttactgaa	ttccttacta	tgactcttct	atatttgaca	tgccacacga	180
tggttcagcaa	tgactttctac	tcaagagcta	gttttttagtt	tcacactgct	tttctcttgt	240
tctttatctt	ttgcttttgt	agctcagaac	agaaaaatct	atagaaaaga	tcttgctacc	300
aggctatggg	acctctctgt	ccatggcgat	atcttactgt	ctttgtgtct	ttgggctgag	360
caatectgca	gcatgggtgta	tgctcaataa	tgctcatgga	acaaaatggg	gtgggttcctc	420
ttccaggaag	tgctgccatc	tctcttttga	ttgagaatag	gtttacctag	gtgattacat	480
cactaacatt	gtattcctgt	gatttcttcc	tcatgatagg	acagatttta	ctaaaaagtc	540
aaaaattatt	tattacatta	tgccgttctc	cttacttttc	atgccagatt	aaattttctt	600
ggctccttcaa	tgcccacttc	taatatcaat	aaacaagtaa	cctttcccca	acctactgaa	660
gtcgccatgt	ggaattgggc	attctttctg	ttgattccat	atcatccctc	tcattcttct	720
gtctgcccgt	ttgtccatcc	atttatccat	ccacttagct	attcgttcgt	tcaacaatga	780
tttagtgaat	acctacttac	tgtgacccta	tt			812

<210> 489

<211> 931

<212> DNA

<213> Unknown (H38g338 nucleotide)

<220>

<223> Synthetic construct

<400> 489

atgtcattag	ctgaaggaaa	tcagagttct	ggagccgtat	ttaccctctt	gggcttctca	60
gaatatgcag	acctccaggt	tcctctgttc	ctgggtcttc	tgaccatcta	cacaatcact	120
gtattgggaa	acctgggcat	gatcatgac	atcaggatca	accccaaact	ccacaccgc	180
atgtactttt	tcctcagcca	cttgctcttt	gttgatttct	gttattccac	cacagttaca	240
cccaaactgc	tgagagaact	ggttgtggaa	gacagaacca	tctccttcac	aggatgcac	300
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gcctatgatt	gatacgtggc	gggtgtgaac	cctttgctct	acacagttgt	caggtcccag	420
aaactctgtg	catcattagt	ggcagggccc	tacacatggg	gtataatctc	ttctctgaca	480
ctcacctatt	tcctcttgct	attatccttc	tgtgggtcta	acatcatcaa	taattttgtc	540
tgtgagcact	ctgtcatcat	ctctgtctcc	tgctctgacc	cctacatcag	ccaaatgctt	600
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tattgtgtac	ccaaactcaa	aaactcatgg	ctcatagtca	aagtaggttc	tgtgttttat	840
acagtcatca	tccccacgtt	gaacccttta	acctacagcc	tcaggaacaa	agacgtgaaa	900
gagagtgttc	gaaagttaat	gaatcactca	a			931

<210> 490

<211> 651

<212> DNA

<213> Unknown (H38g339 nucleotide)

<220>

<223> Synthetic construct

<400> 490

ttcttgggtcc	tttttgcatt	tatagaagac	atgttctctga	ctgtgatggc	ctatgactgc	60
tttatagcca	tctgtcatcc	tctgcaactac	ccagtcacgc	tgaatcctca	cctctgtgtc	120
ttcttcattt	tggtgtcctt	tttccttagc	ctgttggatt	cccagctgca	tagctggatt	180
gtgtttacaat	tcaccatcat	caagaatgtg	gaagtctcta	attttgtctg	tgacccctct	240
caactttctca	aacttgccgt	ttctgacagc	gtcatcaata	gcatattcat	atatttcgat	300

aatactatgt	ttggttttct	tcccatttca	gggatccctt	ggctcttacta	taaaatcgtc	360
ccctacattc	tcaggatttc	atcgtcagat	gggaagtata	aagccttcgc	cacctgtggc	420
tctcacctgg	cagttgcttg	ctgattttat	ggaacaggca	ttggcatgta	cctgacttca	480
gctgtgtcac	cacccccag	gaatgggtgtg	gtggcatcag	tgatgtacgc	tgtggtcacc	540
cccatgctga	acctttttat	ctacagcctg	agaaacaggg	acatacaaag	tgccctgcgg	600
aggctgcgcc	ccagaacagt	cgaatctcat	gatctgttcc	atcctttttc	t	651

<210> 491

<211> 933

<212> DNA

<213> Unknown (H38g340 nucleotide)

<220>

<223> Synthetic construct

<400> 491

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cctgagttga	gagtcctgc	cttcctgctg	tctcttctca	tctatggagt	cacgttggtta	120
gccaatctgg	gcatgactgc	actgattcag	gtcagctctc	ggctccacac	ccccgtgtac	180
tttttccctca	gccacttgct	ctttgtagat	ttctgctact	cctcaataat	tgtgccaaag	240
atgtttggcta	atatctttta	caaggacaaa	gccatctcct	tcctaggggtg	catgggtgcaa	300
ttctacttgt	tttgcacatg	tggagtcact	gaggtcttcc	tgctggccgt	gatggcctat	360
gaccgctttg	tgcccatctg	taacccctg	ctgtacatgg	tgaccatgtc	tcagaagctg	420
cgtgtggagc	tgacctcttg	ctgctacttc	tgtgggacgg	tgtgttctct	gattcactcg	480
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ctggtggcca	ctttgaatga	gagtggtacc	atcatgatca	tcctcacctc	ctacctgcta	660
attctcacca	ctatcctgaa	gatacactct	gcagagagca	ggcacaaaagc	tttctccacc	720
tgtgcctccc	acctcacagc	catcactgtc	tcccatggaa	caatccttta	cattttattgc	780
aggccgagtt	caggcaacag	tggagatgtt	gacaaaagtgg	ccaccgtgtt	ctacacagtt	840
gtgattccca	tgtgaaccc	ctgatctac	agcctgagaa	ataaggatgt	gaacaaagct	900
ctcagaaaag	tgatgggctc	caaaattcac	tcc			933

<210> 492

<211> 963

<212> DNA

<213> Unknown (H38g341 nucleotide)

<220>

<223> Synthetic construct

<400> 492

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gattacctgg	aactgcaaat	tcccctcttc	tttgtatttc	tggcagtcta	cggcttcagt	120
gtggtaggga	atcttgggat	gatagtgate	atcaaaaatta	acccaaaatt	gcataccccc	180
atgtattttt	tcctcaacca	cctctccttt	gtggatttct	gctattcctc	catcattgct	240
cccatgatgc	tggtgaacct	ggtttagaaa	gatagaacca	tttcattctc	aggatgtttg	300
gtgcaattct	ttttcttttg	cacctttgta	gtgactgaat	taattctatt	tgcggtgatg	360
gcctatgacc	actttgtggc	catttgcaat	cctctgctct	acacagttgc	catctcccag	420
aaactctgtg	ccatgctggg	ggttgtattg	tatgcatggg	gagtcgcag	ttccctgaca	480
ctcgcgtgct	ctgctttaaa	gttatctttt	catgggttca	acacaatcaa	tcatttcttc	540
tgtgagttat	cctccctgat	atcactctct	taccctgact	cttatctcag	ccagttgctt	600
cttttctactg	ttgccacttt	taatgagata	agcacactac	tcatacttct	gacatcttat	660
gcattcatca	ttgtcaccac	cttgaagatg	ccttcagcca	gtgggcaccg	caaagtcttc	720
tccacctgtg	cctcccacct	gactgccatc	accatcttcc	atggcaccat	cctcttcttc	780
tactgtgtac	ccaactccaa	aaactccagg	cacacagtea	aagtggcctc	tgtgttttac	840
accgtggtga	tccccttggt	gaatcccctg	atctacagtc	tgagaaataa	agatgttaag	900
gatgcaatcc	gaaaaataat	caatacaaaa	tattttcata	ttaaacaatag	gcattgggat	960
cca						963

<210> 493

<211> 303
 <212> DNA
 <213> Unknown (H38g342 nucleotide)

<220>
 <223> Synthetic construct

<400> 493
 tgttgcccac tccaccacca ttacctgcct agacagtcac tggatcagct cacataactta 60
 attgctttga ttttcaattt tctctttgtt tttggcctcc agagtccctt tatttttctta 120
 aaggcatgac agtgctttcc aaaggatata cactatattt tctgtaaggc gagaagggct 180
 tcaggttatc taacctacca tattgctgga aatagaagtt aaaccgtttt tttcctagtc 240
 tgtaactgcc actattatgg tgatgatata ggctaagtct gaatattttta tgtgaacata 300
 tta 303

<210> 494
 <211> 957
 <212> DNA
 <213> Unknown (H38g343 nucleotide)

<220>
 <223> Synthetic construct

<400> 494
 atgcctgtgg ggaaacttgt cttcaaccag tctgagccca ctgagtttgt gttccgtgcg 60
 ttcaccacag ccactgaatt ccaggttctt ctcttccttc tcttcctcct cctctacttg 120
 atgatcctct gtggcaacac agccatcatc tgggtgggtgt gcacacacag caccctccgc 180
 accccgatgt atttcttcct gtccaacctg tctttcctgg aactctgcta caccaccgtg 240
 gtagtaccct tgatgctttc caacattttg gggggccaga agcccatttc gttggctgga 300
 tgtggggccc aaatgttctt ctttgtcacc ctcggcagca cggactggtt cctcttggcg 360
 atcatggcct atgaccgcta tgtggctatc tgccacccgc tgcactacac cctcatcatg 420
 acccgcgagc tgtgcacgca gatgctgggt gggggccctg gcctggccct cttcccctcc 480
 ctgcagctca ccgccttaat cttcaccttg cccttttgcg gccaccacca ggaaatcaac 540
 cacttcctct gcgatgtgcc tccggtcctg cgcttgccct gcgctgacat ccgctgtcac 600
 caggctgtcc tctatgtcgt gagcatcctc gtgctgacca tccccttctt gctcatctgc 660
 gtctcctacg tgttcatcac ctgtgccatc ctgagcatac gttctgcccga gggccgcccgc 720
 cgggccttct ccacctgttc cttccacctc accgtgggtc tgctgcagta tggctgtgctc 780
 agcctcgtgt acctgcgtcc tccgtccagc acctcagagg atgaggacag ccaaatcgcg 840
 ttgggtctaca cctttgtcac ccccttactc aaccctttgc tttacagcct taggaacaag 900
 gatgtcaaag gtgctctgag gagtgccatt atccgtaaag cagcctctga cgccaac 957

<210> 495
 <211> 624
 <212> DNA
 <213> Unknown (H38g344 nucleotide)

<220>
 <223> Synthetic construct

<400> 495
 atggagctgg agaattggcac tgtgaagact gggttctttc tcttgggatt cagcgaccat 60
 ctggaacttc agagtctcct ttttgcagaa tttttttcca tctactctgt tactctgatg 120
 gggaaccttg gaatgatttt attaatcaca atcagttccc acttgacacac tcctatgtac 180
 tttttcctct gtgtgttgtc cttcatagat gcatgctact cttctgtcat tgctcccaaa 240
 ttacttgtga acttgggtttc tgaaaagaag accatttctt acaatggctg tgttgacacag 300
 ttatatattct tctgctcttt agttgacaca gaatctttcc tcttggctgc catggcttaa 360
 gaccggtaca tagcaatctg taaccgcgtg ctctatacag tgattatgtc caagaaggtt 420
 tgttgccagc ttgcaattgg agcatttttg gggggcacta tgagctcaat tattcatacc 480
 acgaacactt ttccactgtc attctgtccc agagatatta accatttctt ttgtgatata 540
 tccccactct tctctctgtc ctgcactgac acatacatgc atgacatcat tctgggtggc 600
 tttgccagtt ttgtggaagc aatc 624

<210> 496
 <211> 963
 <212> DNA
 <213> Unknown (H38g345 nucleotide)

<220>
 <223> Synthetic construct

<400> 496
 cacacagagc cacggaatct cacaggtgtc tcagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagcctgt cctccctggg ctgtccctgt ccatgtatct gctcacggtg 120
 ctgaggaacc tgctcatcat cctggctgtc agctctgact cccacctcca ccccccatg 180
 tactttcttc tctccaaccc gtcatgggct gacatcgctt tcacctcggc cacagttccc 240
 aagatgattg tggacatgca gtcgcatagc agtcatctct tatgcaagct gcctgacaca 300
 gatgtctttc tttgcccttt ttgcatgcat agaagatcat gtccttgatt gtgatggcct 360
 atgaccgatt tgtagccgtc tgtcactccc cacactaccc agtcatcatg aatcctcgcc 420
 tcggtgtctt cttcgttttg gtgtcctttt tccttagcct gttggattcc cagctgcaca 480
 gttggactgt gttacaattc accttcttca agaattgtga aatctctaata tttgtctgtg 540
 acccatctca acttctcaac cttgcctgtt ctgacagcgt catcgatagc atattcatat 600
 atttagatag tactatgttt cgttttcttc cgatttcagg gatccttttg tcttactcta 660
 acattgtccc ctccattcta agaatttcat catcagatgg gaagtctaaa gccttctcca 720
 cctgtcgtc tcacctggca gttgtttgct tattttatgg aacaggcatt ggcgtgtacc 780
 tgacttcagc tgtggcacca cccccaggag tgggtgtgtg gtgtcagtga tgtacactgt 840
 ggtcaccccc atgctgaacc ctttcatcta ctgcctgaga aacagggaca ttcaaagcgc 900
 cctgtggagg ctgcgcagca gaacagtcga atctcatgat ctgttccatc ctttttcttg 960
 tgt 963

<210> 497
 <211> 932
 <212> DNA
 <213> Unknown (H38g346 nucleotide)

<220>
 <223> Synthetic construct

<400> 497
 gaaaagaatc tcattctctat gaatggggtt atgaacttca ctgattaccc agagttggaa 60
 atgcccttgt tcttagtggt tctcagttgc ttcctggcca ttattttgag aaatatggaa 120
 tgggtcattc tgacccaagt gaatgtgcat ctcttcaccc tatatacttc ttcctaacaa 180
 atgtcaccct ttgggatacc tcagtcatca tgcctcagat cctggccatt ctggccacag 240
 gcaagacaac catttcctat ggccgctaata aaaagcaatg aggtcctttt tcttcatttg 300
 tgtaggaact tagtgtttcc tgccaacagc aatgaccata agcagccac tgccccacac 360
 tacaagccat gaatttcaag acatgttggg gttttttttt ggtggggatt tgttgttgta 420
 catgctgggt tttgatgggt aacgtggtga atgcctacac ctgaggacta tcaggagcca 480
 ctttcaacac catctgcaca tttgcccgct tcttctgtga tgacaattag atcaaattct 540
 gtcacatcct gccctgctg aagctcattt gaaatacttc aggaacacagc aagataatta 600
 ttgtgatctt tgacagcttt tatgattata gctggcacta gggtcacct gatctcttac 660
 ctgctaatca tcagggtctt gaggatgaaa tcatcgagtg gcaaagccaa taattttatc 720
 catccacttg tgccctccac ctaactgcta tgaccttctt ttgggatccc catcttcaga 780
 catgtgaagt acctcagata aatcactgac agaagacaag ttggcatcat gacttgcacc 840
 atctttatct ctatgctaga acttttgatc caaagtctaa agaaggatat acaagttgcc 900
 ttcaaaaagg ccataggtaa cttctgggtt tt 932

<210> 498
 <211> 1005
 <212> DNA
 <213> Unknown (H38g347 nucleotide)

<220>
 <223> Synthetic construct

<400> 498

tctacagacc	cacagaatct	aacagatgtc	tctatatattcc	tcctccgaga	acctcagagg	60
atccagaatg	gcagctggtc	cttgctgggt	tggtccctgtc	catgtgcctg	gtaacgggtgc	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acttcttcct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acggtagcca	240
agatgattgt	ggacatccaa	tctcacagca	gagtcattctc	ctatgcaggc	tgcttgactc	300
agatgtctcc	ctttgccatt	tttggagtca	tggaagagag	acacgctcct	gagtgtgatg	360
gcctctgacc	gctttgtagc	catctgtcac	cctctatatac	attcagccat	catgaacccg	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttt	tttctgtctt	ttagatgccc	480
agctgcacaa	cttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
tcttctgtga	cccttctcaa	ctcccccatc	ttgcatgttg	tgacaccttc	accaataaca	600
taatcatgta	tttccctgct	gccatatttg	gttttcttcc	catctcgggt	tcccttttct	660
cttactataa	aattgtttcc	tccattctga	gggtttctac	atcagggtggg	aagtattagg	720
ccttctcctc	ctgttggtct	cacctgtcag	ttgtttgctg	attttatgga	acaggcggtg	780
gaggtagctc	agttgagatg	tgctcatcttc	cccagggaag	gttgtagtgg	cctcagtgat	840
gtacatgggtg	gtcaccctta	tgctgaacct	ctttgtctac	agcctgagaa	acagggatat	900
taaaagtgtc	ctgcgggtggc	cgcacggcag	cacgggtctaa	tctcaatatc	ttcttatctg	960
ttccattcct	tttgtagtgt	agggttaaaaa	ggcagcaagg	tcaaa		1005

<210> 499

<211> 975

<212> DNA

<213> Unknown (H38g348 nucleotide)

<220>

<223> Synthetic construct

<400> 499

atgaagactt	ttagtctcct	tcttcagatc	ggcagaaata	tgcatcaagg	aaaccaaacc	60
accatcactg	aattcattct	cctgggattt	ttcaagcagg	atgagcatca	aaacctcctc	120
tttgtgcttt	tcttgggtat	gtacctgggc	actgtgattg	ggaacgggct	catcattgtg	180
gctatcagct	tggatacgta	ccttcatacc	cccatgtatc	tcttccttgc	caatctatcc	240
tttgtctgata	tttccctccat	ttccaactca	gtccccaaaa	tgctgggtgaa	tattcaaacc	300
aagagtcaat	ccatctctta	tgagagctgc	atcacacaga	tgtacttttc	tattgtgttt	360
gtcgctcattg	acaatttgct	cttggggacc	atggcctatg	accactttgt	ggcgatctgc	420
cacctcttga	attatacaat	tctcatgcgg	cccagggttcg	gcatttttgc	cacagtcatc	480
tcattggttcc	tcagtaatat	tattgtctctg	acacacaccc	ttctgtctcat	ccaattgtctc	540
ttctgttaacc	acaacactct	cccacacttc	ttctgtgact	tggccctctc	gctcaaactg	600
tctgtttcag	atacattgat	caatgagctt	gtgttggttta	ttgtgggttt	atcagttatc	660
atcttccccct	ttacactcag	cttcttttcc	tatgtctgca	tcattcagagc	tgtcctgaga	720
gtatcttcca	cacagggaac	gtggaaagcc	ttctccactt	gtggctctca	cctgacagtt	780
gtattactgt	tctatggaaac	cattgtaggc	gtgacttttt	tcccctcctc	cactcacctc	840
gaggacactg	ataagattgg	tgctgtccta	ttcactgtgg	tgacacccat	gataaacccc	900
ttcatctaca	gcttgaggaa	taaggatatg	aaagggtgcc	tgagaaagct	catcaataga	960
aaaatttctt	ccctt					975

<210> 500

<211> 768

<212> DNA

<213> Unknown (H38g349 nucleotide)

<220>

<223> Synthetic construct

<400> 500

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cccaaactgt	tagagatttt	ggttgtggaa	gacagaacta	tctccttcaa	aggatgcatg	120
gtacaatttt	tctttgggtg	tgcatttgta	atcacagaaa	tgttcatgtt	agcgggtgatg	180
gcttatgact	tgtttatggc	tgtttgtaac	cccctgctct	acacagtggc	tatgtctcct	240
aagctctgtg	ctctcctggg	agctggaact	tacacatggg	gtggactctg	ttccctgaca	300

ctcacttatt	ctcttttggg	gttatccctac	tgtggatcta	acatcataaa	tcactttggc	360
tgtgagtact	ctgccattct	ttctctatcc	tgtctgatac	cctacttcaa	ccagatggcg	420
tgttttagtca	tttctatatt	cagtgaagct	tgtagcctcc	tggccatcct	tgccttctat	480
gtcttcatag	ttgccactgt	catcaagatg	ctttctacgg	gtggacccca	aaaggccatc	540
tccacctgtg	cctcccacct	gaccaccgtc	tccattttcc	atgggggtcat	cctgctcctt	600
tactgtgtgc	ccaactccaa	aagctcatgg	ctcctgggtca	aagtgggtac	tgtacttttt	660
acagtcataa	tccctatgct	gaatccccctg	atctacagcc	ttaggaacaa	agatgtaaaa	720
gggaccgtca	ggaagttgat	aaactcccaa	tcaccttttc	actcaaaa		768

<210> 501

<211> 951

<212> DNA

<213> Unknown (H38g350 nucleotide)

<220>

<223> Synthetic construct

<400> 501

atggcagaga	gtggcaccac	ggtagacagaa	ttttttctga	gggggttccg	gttgaaggca	60
gagctgcaga	taggtctctt	ctttgtgttt	ctgggtcattt	ttctcatcac	catggggggc	120
aacctgggca	tgattgtgct	aatttaattc	agactgacct	tcgggtccag	actcccatgt	180
acttcttctt	cagtcattct	tccttctctg	acatttgcta	ctcttctgtt	attgggtcctc	240
agttgcttga	gactttggga	ctgataagat	gatcatcacc	tatgagcgct	gtgccagcca	300
attcttcttt	ttcacactct	gtgctagcat	tgagtgtttc	cttttggctg	tgatggctta	360
tgaccggtac	gtggctgtgt	gtaacccccct	cctctatgcc	atagtcatga	caccaaagac	420
ccgctggcgc	ctgctggccg	gggcatattc	tggtgccata	gtcaattctg	tgatctgcac	480
tggtgcacc	ttctctatct	ccttctctaa	gtccaacat	gtagacttct	ttttctgtga	540
cctcccaccc	ctgctgaagc	ttgcctgtag	tgaaccagg	ccacgggaat	gggtaatacta	600
cctctcagct	tttctgggtca	tcacaaccag	catttcagtg	attcttacat	cgtacttggt	660
catcattcag	tctgttctga	agattcgtac	agcaggtgga	aagccaagac	cttctccacc	720
tgtgcttctc	acatgactgc	attgactctc	ttctttggaa	cactcatatt	catatacctg	780
aaaggcaaca	tgggcgaatc	ccttgaggaa	gacaagatcg	tgtcaatatt	ttacactgtg	840
gtcatcccca	tgctaaatcc	aatgatctac	agcctgagaa	acaaagacat	gaaagaggct	900
ctgaagaaag	ttttcaacag	gataagggtt	tccaagcag	agtaactctt	g	951

<210> 502

<211> 939

<212> DNA

<213> Unknown (H38g351 nucleotide)

<220>

<223> Synthetic construct

<400> 502

atgctgctga	cagatagaaa	tacaagtggg	accacgttca	ccctcttggg	cttctcagat	60
taccagaac	tgcaagtccc	actcttctctg	gtttttctgg	ccatctacaa	tgtcactgtg	120
ctagggata	ttgggttgat	tgtgatcatc	aaaatcaacc	ccaaactgca	tacccccatg	180
tactttttcc	tcagccaact	ctcctttgtg	gatttctgct	attcctccat	cattgctccc	240
aagatgttgg	tgaaccttgt	tgtcaaagac	agaaccattt	catttttagg	atgcgtagta	300
caattctttt	tcttctgtac	ctttgtggtc	actgaatcct	ttttattagc	tgtgatggcc	360
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acgtgctctg	ctttaagtt	atgttttcat	ggtttcaaca	caatcaatca	cttcttctgt	540
gagttctcct	cactactctc	cctttcttgc	tctgatactt	acatcaacca	gtggctgcta	600
ttctttcttg	ccacctttaa	tgaatcagc	acactactca	tcgttctcac	atcttatgcg	660
ttcattgttg	taaccatcct	caagatgcgt	tcagtcagtg	ggcgccgcaa	agccttctcc	720
acctgtgect	cccactgac	tgccatcacc	atcttccatg	gcaccatcct	cttcccttac	780
tgtgtgccc	actccaaaa	ctccaggcac	acagtcaaa	tggtcctctg	gttttacacc	840
gtggtgatcc	ccatgttgaa	tcccctgac	tacagtctga	gaaataaaga	tgtcaaggat	900
acagtcaccg	agatactgga	caccaaagtc	ttctcttac			939

<210> 503
 <211> 932
 <212> DNA
 <213> Unknown (H38g352 nucleotide)

<220>
 <223> Synthetic construct

<400> 503

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ctccagtggg	gggttcctct	cttcctcata	tttttgagtt	tctatcttgc	cactatgtta	120
gggaacacag	gcatgatcct	cctgatccgt	ggcgatcgtc	ggctccacac	cccgatgtac	180
ttcttctctc	gccacctttc	cttggtggac	atctgctact	cgcccgccat	catccctcag	240
atgctggctg	tgctgtggga	gcacggcaca	accatctccc	aggctcgctg	tgcagctcag	300
ttcttctctc	tcaccttctt	tgccctccatc	gactgctacc	ttctggccat	catgcctatg	360
accgctacac	ggcctgtgtc	agccccctgt	ttatgtcacc	atcataaccg	agaaggaccg	420
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cagccttcac	tctctccttt	tgtggaaaca	atgagatcaa	cttcattttc	tgtgacctcc	540
ctcctctatt	aaaactctcc	tgtgggggaca	gctacactca	ggaagtgggtg	attatttgtgt	600
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cctcccacct	cactgccgtc	gctcttttct	ttggcaccct	catcttcatg	tacctgcgag	780
acaacacagg	ccagtccctc	gagggagacc	gagtgggtgtc	tgtgctctac	acgggtggtga	840
ccccaatgct	gaatccccct	atctatagcc	tgagaaacaa	ggaggtaaaa	gaggccacta	900
ggaaagccct	gagcaaatca	aagcctgcta	ga			932

<210> 504
 <211> 762
 <212> DNA
 <213> Unknown (H38g353 nucleotide)

<220>
 <223> Synthetic construct

<400> 504

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gtcaccatgc	tgagtatatt	ctggttcaat	gtgagggaaa	tcagctttaa	tgctgtcttg	120
tcccacatgt	tctttattaa	attcttcact	gtcatggaat	cctcagtgtc	gttggccatg	180
gcttttgatc	gttttggtgc	cgctctctaat	ccccttaggt	atgccatgat	tttaactgac	240
tccagaatag	ctcaaattgg	agtggcaagt	gtcatcaggg	ggctccta	gctgacacca	300
atggtagcac	ttcttataag	actttcctac	tgccacagcc	aagtactcca	ccactcctac	360
tgctaccacc	ctgatgtgat	gaagctctca	tgacagaca	ccagaatcaa	cagtgcagtt	420
gggctgactg	ccatgttctc	tactgttggt	gtagacttac	ttctcatcct	cctttcttat	480
gttttgatca	ttaggactgt	ccttagcggt	gcttccccag	aagagaggaa	ggaaaccttc	540
agtacatgtg	tctcccacat	tgtggctttt	gctatatatt	acattccatt	gatcagctctg	600
tccattgttc	acagatttgg	gaaacaagcc	ccagcctatg	tacatactat	gatttgctaac	660
acctacctgc	tgatctcccc	tttgatgaac	cctgtcatct	acagtgtgaa	aaccaaacag	720
atacgtagag	ctgtgataaa	aattctccat	tccaaagaaa	ca		762

<210> 505
 <211> 565
 <212> DNA
 <213> Unknown (H38g354 nucleotide)

<220>
 <223> Synthetic construct

<400> 505

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ccagagatga	aagtgacctt	atttgctgta	ttcttggtctg	tttatatcat	taatttctca	120
gcaaatcttg	gaatgatagt	tttaatcaga	atggattacc	aacttcacac	accaatgtat	180

ttcttctca	gtcatctgtc	tttctgtgat	ctctgctatt	ctactgcaac	tgggcccgaag	240
atgctggtag	atctacttgc	caagaacaag	tcaataccct	tctatggctg	tgctctgcaa	300
ttcttgggtct	tctgtatctt	tgcagattct	gagtgcttac	tgctgtcagt	gatggccttt	360
gacgggtaca	aggccatcat	caacccccctg	ctctatacag	tcaacatgtc	tagcagagtg	420
tgctatctac	tcttgactgg	ggtttatctg	gtgggaatag	cagatgcttt	gatacatatg	480
acactggcct	tccgcctatg	cttctgtggg	tctaattgaga	ttaatcattt	cttctgtgat	540
atccccctct	ctcttattac	tctct				565

<210> 506

<211> 978

<212> DNA

<213> Unknown (H38g355 nucleotide)

<220>

<223> Synthetic construct

<400> 506

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ctcagcactg	tgacagagtt	cattcttgta	gtcttcacag	atcacccctga	actggcagtt	120
ccactcttcc	tagtggttct	cagtttctat	cttgctactt	ttctggggaa	tggggggatg	180
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gccacagaca	agacagttat	ctcctatggc	tgccgtgctg	tgcaagtctc	tttcttcacc	360
atatgtgcag	gcacagagtg	ttacctgctg	tcagtgatgg	cctatgaccg	ctttgttgcc	420
attagcaatc	cactgcactg	taacatgacc	atgactccag	gtacctgcag	ggcttttttg	480
gccagtgcct	tcactgtggt	ggtgtcaggg	gccattctgc	ataccacgtg	caccttcacc	540
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aagctcgctt	gcagcagcat	gacacaaact	gagattgtca	ttctcctttg	tgcaaaatgc	660
atgttccctag	ccaatgtcat	ggttatcctg	atctgtctaca	tgctcattat	cagagccatt	720
ttgagggtga	agtcggcagg	tgggtaagcc	aagaccttct	ccacctgcac	ctcccatctc	780
accactgttg	tcctcttctt	tgggacactt	gccttcatgt	accagagaag	taactccgcc	840
aaatcctcag	aggaagacaa	gatagtgtct	gtctttttaca	ctgtaatcat	ccctatgttg	900
aacccttga	tctacagtct	gaggaacaaa	gatgtaaaag	ctgcatttgg	aaaactcggt	960
ggtaaattcc	aatttcca					978

<210> 507

<211> 983

<212> DNA

<213> Unknown (H38g356 nucleotide)

<220>

<223> Synthetic construct

<400> 507

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attggcatcc	cagggtctga	ggcggttcat	ggctggctcg	ccatccccctt	ctcctccatg	120
tacactgtgg	ccctccctgg	gaactgcctg	atcctcctgg	ctgtgaagag	gaaccccagc	180
ctgcaccagc	ccatgtgcta	cttctgtccc	atgctggcgc	tccccaaagc	gggcctcacc	240
ttgtccacac	tgcccatcac	cttggtctgtg	ctctggtttg	accaccggct	catgggcttc	300
aatgcctgcc	tgggtccagat	gttcttccctg	cactcctctg	tgggtggagtc	ctcagtgtctc	360
ctggccatat	cctttgacca	ctttgtggcc	atctccaacc	cctgcacta	tgcagtgtctc	420
ctcacaaata	gtgtcatcat	caggattggg	ctggccattg	tggctcaagt	taccttgtgc	480
ctcttctctg	gccatttccg	gttaagagtc	taaatttctg	ccctggtgat	aacatcccat	540
cccactcggt	ctgtttccac	cctgatgtaa	tgaggcgggc	ctgtgcggac	atcacgatca	600
atatatgcta	tgggggtctac	gtgggtgttt	ctacaggggg	cttagactcg	ctgctcatct	660
ttctgtccta	taccttcac	ctgcacacag	tcattgggtct	ggctgctccc	agggagcgca	720
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ttgttaccta	tgtgtacctg	gtgatgcctt	ctgtgctcca	ccccatcatt	tacagtatga	900
agtcacagcc	ctcaggggag	gccatcctca	ggatgctgat	ggggagaagc	caaggctgat	960
gaaattacaa	aattattatg	ggt				983

<210> 508
 <211> 933
 <212> DNA
 <213> Unknown (H38g357 nucleotide)

<220>
 <223> Synthetic construct

<400> 508
 atgggcaagg aaaactgcac cactgtggct gagttcattc tccttggact atcagatgtc 60
 cctgagttga gagtctgcct ctctctgctg ttcttctca tctatggagt cacgttgta 120
 gccaacctgg gcatgattgc actgattcag gtcagctctc ggctccacac ccccatgtac 180
 tttttctca gccacttgct ctctgtagat ttctgctact cctcaataat tgtgccaaaa 240
 atgttggcta atatctttaa caaggacaaa gccatctcct tcctagggtg catgggtgcaa 300
 ttctacttgt tttgcacttg tgtggctact gaggtcttcc tgcctggcgt gatggcctat 360
 gaccgctttg tggccatctg taaccctttg ctatacacag tcaccatgtc ttggaagggtg 420
 cgtgtggagc tggcttcttg ctgctacttc tgtgggacgg tgtgttctct gattcatttg 480
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 ctacctcctg tcttaagtct tgcttgctct gatatactg tgaatgagac actgctgttc 600
 ctggtggcca ctttgaatga gagtggtacc atcatgatca tcctcacctc ctacctgcta 660
 attctcacca ccctcctgaa gatgggctct gcagagggca ggcacaaagc cttctccacc 720
 tgtgcttccc acctcacagc tatcactgtc ttccatggaa cagtccttcc catttattgc 780
 aggcccagtt caggcaatag tggagatgct gacaaagtgg ccaccgtgtt ctacacagtc 840
 gtgattccta tgctgaactc tgtgatctac agcctgagaa ataaagatgt gaaagaagct 900
 ctcagaaaag tgatgggctc caaaattcac tcc 933

<210> 509
 <211> 621
 <212> DNA
 <213> Unknown (H38g358 nucleotide)

<220>
 <223> Synthetic construct

<400> 509
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 cgcctttttt ttttttctca gtgttttaga cgcccagctg cacaacttga ttgccttaca 120
 aatgacctgc ttccaggatg cggaaattcc taatttcttc tgtgacctt ctcaactccc 180
 ccattctgca tgttgtgaca ccttcaccaa taacataatc atgtatttcc ctgctgtcat 240
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 tctgagtgtt tcatcatcac gtgggcagta taaggccttc tccacctgtg ggtctcacct 360
 gtcagtgtgt tgctgatttt acggaacggg cggtggagga tacttcagtt cagatgtgtc 420
 atcttccccg agaaaggctg cagtggcctc agtgatgtac acggtgatca ccccatgctg 480
 aacccttca tctacagcct gagaaacagg catattaaaa gtgtcctgcg gcggccgcac 540
 agcagcaccg tccaatctcc gtgtcttctt aactgttcca ttcttttgt agtgtgggtt 600
 aacaaaggca gcaagggtcaa a 621

<210> 510
 <211> 633
 <212> DNA
 <213> Unknown (H38g359 nucleotide)

<220>
 <223> Synthetic construct

<400> 510
 atttgactga aattgatctt tggaaatcct agatagtaat agattttcag atgtgtctat 60
 gattattttg tgggactgtc aaccttgct ttatgacacc atcacaaactc tcaagatgtc 120
 tggcagaagc tgggtgactgc atattgtaga ggggttgaca aatgtaatcc aatgtatata 180
 cttcacctgc tcaactctct tttgtgcctt catctatagg ttccactctc tgtgacctcc 240

attgctgctg	accctgaatt	gggtgatagc	ttcctccagc	agctgctgat	ttttcacttt	300
gctctgtata	tgattctgac	cagactagtt	ttgatcctgt	tctctgactt	gttcatcagc	360
aaggccatct	aaacacctgc	aaatcaggte	tctaggcaaa	gattcctcaa	cctttttcta	420
cctttgcctc	atgcagaact	gcagttcggg	tgattgttga	gactacagct	ttgatctatg	480
tgtgcagcag	taggcaagtc	ccttacaggg	gagagggccg	tgaccatgtt	ttagactgta	540
gtgaacacca	ggctgaccat	tccaatttta	tagcctgagg	aaaaaaaggc	aaaggaggcc	600
ctgaggaaag	gtcttaataa	agccaagttg	ttc			633

<210> 511

<211> 945

<212> DNA

<213> Unknown (H38g360 nucleotide)

<220>

<223> Synthetic construct

<400> 511

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aaagccatt	tctgggttgg	cttccccctc	ctttccatgt	atgtagtggc	aatgtttgga	120
aactgcacg	tggtcttcat	cgtaaggacg	gaacgcagcc	tgacagctcc	gatgtacctc	180
ttctctgca	tgcttgacgc	cattgacctg	gccttatcca	catccaccat	gcctaagatc	240
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cgttatgttg	ccatctgcca	cccactgcgc	catgctgcag	tgctcaacaa	tacagtaaca	420
gcccagattg	gcatcgtggc	tgtgggtcgc	ggatccctct	tttttttccc	actgcctctg	480
ctgatcaagc	ggctggcctt	ctgccactcc	aatgtcctct	cgcactccta	ttgtgtccac	540
caggatgtaa	tgaagttggc	ctatgcagac	actttgcccc	atgtgggtata	tggtcttact	600
gccattctgc	tggtcatggg	cgtggacgta	atgttcatct	ccttgctcta	ttttctgata	660
atacgaacgg	ttctgcaact	gccttccaag	tcagagcggg	ccaaggcctt	tggaacctgt	720
gtgtcacaca	ttgggtgtgg	actcgccttc	tatgtgccac	ttattggcct	ctcagtggta	780
caccgctttg	gaaacagcct	tcacccatt	gtgcgtgttg	tcattgggtga	catctacctg	840
ctgctgcctc	ctgtcatcaa	tcccatcatc	tatggtgcc	aaaccaaaca	gatcagaaca	900
cgggtgctgg	ctatgttcaa	gatcagctgt	gacaaggact	tgcag		945

<210> 512

<211> 834

<212> DNA

<213> Unknown (H38g361 nucleotide)

<220>

<223> Synthetic construct

<400> 512

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cgactgcatg	agcccatgta	cctcttccctg	gccatgcttt	ccactattga	cctagtccctc	120
tcctctatca	ccatgcccaa	gatggccagt	cttttccctga	tggtgcatcca	ggagatcgag	180
ttcaacattt	gcctggccca	gatgttccct	atccatgtct	tgtagccgt	ggagtcagct	240
gtcttgcctg	ccatggcttt	tgaccgcttt	gtggccattt	gccacccatt	gcgccatgct	300
tctgtgctga	cagggtgtac	tgtggccaag	attggactat	ctgccctgac	caggggggttt	360
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gtcaatgttg	tttatggact	cttcactcatc	ctctcagtca	tgggtgtgga	ctctctcttc	540
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gcactcaagg	ctttcaacac	ctgcatctcc	cacctctgtg	ctgttcttgt	cttctatgta	660
cccctcattg	ggctctcggg	ggtgcatagg	ctgggtgggc	ccacctccct	cctccatgtg	720
gttatggcta	atacctactt	gctgctacca	cctgtagtca	accccttgt	ctatggagcc	780
aagaccaaag	agatctgttc	aagggtcctc	tgtatgttct	cacaagggtg	caag	834

<210> 513

<211> 957

<212> DNA

<213> Unknown (H38g362 nucleotide)

<220>

<223> Synthetic construct

<400> 513

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atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120
acagccctgt	taggaacac	cctcatcggt	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgtttct	gctgctgtgg	acattgttat	ggcctcctcc	240
gtggtagcca	agatgggtgag	catcttctgc	tcgggagaca	gctccatcag	ctttagtgtc	300
tgtttctactc	agatgttttt	tgtccactta	gccacagctg	tggagacggg	gctgctgtctg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactataa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccgtcacca	tcagagctgt	cacattcatg	480
actccactga	gttggatgat	gaatcatcta	cctttctgtg	gctccaatgt	ggttgtccac	540
tcctactgta	agcacatagc	tttggccagg	ttagcatgtg	ctgaccccg	gccagcagt	600
ctctacagtc	tgattgggtc	ctctcttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcag	ggcagtattt	gatctctcct	caaagactgc	tcagttgaaa	720
gcattaagca	catgtggctc	ccatgtgggg	gttatggctt	tgtactatct	acctgggatg	780
gcatccatct	atgcggcctg	gttggggcag	gatatagtgc	ccttgcacac	ccaagtgtctg	840
ctagctgacc	tgtacgtgat	catcccagcc	actttaaatc	ccatcatcta	tggcatgagg	900
accaaacaat	tgctggaggg	aatatggagt	tatctgatgc	acttcctctt	tgaccac	957

<210> 514

<211> 966

<212> DNA

<213> Unknown (H38g363 nucleotide)

<220>

<223> Synthetic construct

<400> 514

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agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttctgc	taccctaaa	240
atgattgcag	actttctggg	tgagcacaag	actatttctt	ttgatgcca	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgtgc	tcgtctcat	ttcctggttt	gtgggcttca	tccataccac	cagccagtgtg	480
gcattcacgt	taatctgcca	ttttgtggtc	ctaataaggt	agatagtttt	tttctgtgac	540
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gcagatagtg	gctttctttc	tctgagttcc	tttctcctct	tggttgtctc	ctacactgta	660
atacttgta	cagttaggaa	tcgtctctct	gtaagcatgg	tgaaggccca	ctccacattg	720
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attttaaac	ctgtaatcta	catgctaaga	aacaaagaag	tgaaggcagc	tatgtcaaaa	900
ctgaagagtc	ggtatcagaa	gcttgggtcag	gtttctgtag	tcataagaaa	cgttcttttc	960
ctagaa						966

<210> 515

<211> 966

<212> DNA

<213> Unknown (H38g364 nucleotide)

<220>

<223> Synthetic construct

<400> 515

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atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120

atagccctgt	taggaaacac	catcatcgtg	actgcaatct	ggatggattc	cactcggcac	180
gagcccatgt	attgctttct	gtgtgttctg	gctgctgtgg	acattgttat	ggcctcctcg	240
gtggtaccca	agatggtgag	catcttctgc	tcaggagaca	gctcaatcag	ctttagtgtc	300
tgtttcactc	agatgttttt	tgtccactta	gccacagctg	tggagacggg	gctgctgtcg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccatcacca	tcagagctat	catagccata	480
actccactga	gttggatggg	gagtcactta	cctttctgtg	gctccaatgt	ggttgtccac	540
tcctactgtg	agcacatagc	tttggccagg	ttagcatgtg	ctgaccccg	gcccagcagt	600
ctctacagtc	tgattgggtc	ctctcttatg	gtgggctctg	atgtggcctt	cattgtgcgc	660
tcctatatct	taattctcaa	ggcagtat	gggtctctct	caaagactgc	tcagttgaaa	720
gcattaagca	catgtggctc	ccatgtgggg	gttatggctt	tgtactatct	acctgggatg	780
gcatccatct	atgcggcctg	gttggggcag	gatgtagtgc	ccttgcacac	ccaagtcctg	840
ctagctgacc	tgtacgtgat	catcccagcc	accttaaatc	ccatcatcta	tggcatgagg	900
accaaacaac	tgcgggagag	aatatggagt	tatctgatgc	atgtcctctt	tgaccattcc	960
aacctg						966

<210> 516

<211> 942

<212> DNA

<213> Unknown (H38g365 nucleotide)

<220>

<223> Synthetic construct

<400> 516

atggagggggt	tcaactattc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agatattctt	ttctgtgggt	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtccta	tcacacctac	accttcactc	tcgcatgtac	180
ttcctgtctc	gcaacatgtc	tcattgacat	gtgctgtccc	tcctttgcca	caccaaagat	240
gattatggac	ttttttgtct	tgcgtaagac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ttgatctcca	tgtcttttga	360
caggtatatt	gccatatgta	aacctctcca	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttcccttgg	tcateccagt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagtg	gtgtgattgc	tcttataagt	tttctgcttt	tgctcacctc	ctacatcatt	660
gttcttaata	ttgtcaggga	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcgcatt	ttattgttgt	gttaatgttc	tttgggccc	gtattttcat	ttatgtgtgg	780
ccttccacaa	acttctctgg	agacaaaatt	ctctccgttt	tctataccat	cttcaactcc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgctc	cg		942

<210> 517

<211> 952

<212> DNA

<213> Unknown (H38g366 nucleotide)

<220>

<223> Synthetic construct

<400> 517

atgctcactt	ttcataatgt	ctgctcagta	cccagctcct	tctggctcac	tggeatccca	60
gggctggagt	ccctacacgt	ctggctctcc	atcccccttg	gctccatgta	cctgggtggct	120
gtggtgggga	atgtgaccat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatctt	ctgggtccgg	gcttgtgaca	ttggcctgga	cgccgtgctg	300
ggccaaatgt	tccttatcca	ctgctttgcc	actggtgagt	caggcatctt	ccttgccatg	360
gcttttgatc	gctacgtggc	ccatctgcaa	cccactacgt	catagcatgg	tgctcactta	420
tacagtgggt	ggctgttgg	ggctgtttc	tctctccgg	gggtgttctct	acattggacc	480
tctgcctctg	atgatccgcc	tgcggtgcc	ccctttataaa	acccatgtta	tctccactc	540
ctactgtgag	cacatggctg	tagttgcctt	gacatgtggc	gacagcaggg	tcaataatgt	600

ctatgggctg	agcatcggtt	ttctgggtgt	gatcctggac	tcagtggcta	ttgctgcatc	660
ctatgtgatg	atcttcaggg	ccgtgatggg	gttagccact	cctgaggcta	ggcttaaaac	720
cctggggaca	tgcgcttctc	acctctgtgc	catcctgac	ttttatgttc	ccattgctgt	780
ttcttccttg	attcacccat	ttggtcagtg	tgtgcctcct	ccagtccaca	ctctgctggc	840
caacttctat	ctctctcatc	ctccaatcct	caatcccat	gtctatgctg	ttcgcaccaa	900
gcagatccga	gagagccttc	tccaaatacc	aaggatagaa	atgaagatta	ga	952

<210> 518

<211> 301

<212> DNA

<213> Unknown (H38g367 nucleotide)

<220>

<223> Synthetic construct

<400> 518

cagatgctga	cagattgggtg	gggacctaata	aggaccacaa	gttacgtgaa	ctcaccattc	60
aattccttgt	ctctctgttag	ttatgtgcca	ctatataatt	tctacaatta	ttttataaatt	120
atagccatc	ctttgtaata	tttgtaatac	atgaacctat	atctcctcct	taatcttact	180
tttaatacttg	agggataaatt	cattcatttt	tggcatcatg	tatactctca	tcctaaaaaat	240
tccaaggatg	aaaaaaaaaa	accttcagat	aattccctc	attggttgct	gccttgctga	300
a						301

<210> 519

<211> 506

<212> DNA

<213> Unknown (H38g368 nucleotide)

<220>

<223> Synthetic construct

<400> 519

aatagtga	ccaagcattt	cttactctta	aaattgtgtt	caatgtttgc	agtcactttc	60
ctatccctga	tattatcagg	aaagggcctg	caatttcctt	tctacttctc	tgagtcaact	120
gcaaagtctc	agatgttttc	acagttgaga	caagagaaca	agaagcacca	atgaaaacca	180
cggggttcta	tggaggcatc	atgggtgtgt	gagtagaagc	atgctactct	agctgtatct	240
cactgggttc	aaatcctgac	tatacggcat	atgggtgcatt	aacagcccg	tgaccacaag	300
aatttctatg	ctggtaaaat	aggtttataa	taatgccagt	caatctaaag	atgctttaag	360
tgaagactat	ttgggtgttt	tcaaggactc	aataatcatt	aactgtgatc	acgatctttc	420
ccttacctac	tttcaataag	taaataattt	acattttatta	aacaaaagaa	atttaattctt	480
gcttttctga	aacaacacaa	ttctat				506

<210> 520

<211> 837

<212> DNA

<213> Unknown (H38g369 nucleotide)

<220>

<223> Synthetic construct

<400> 520

ctccctcccc	tggttttttag	agttttttgta	atcttggttt	gtttcactac	tctttgttaa	60
gctatgcatt	ctcttttctaa	ttattctact	tgttaaattt	ttattaaaaa	caaaaatagc	120
aatgacatat	tttaccatatt	tatctaatta	taagctcaaa	gcatgaaata	gtattgactt	180
ccacatacat	atgttttgtgt	acgtgtatat	tatgaataaa	ttagtctatc	tcaaataatga	240
aactttaaca	tcttttaccat	tttttttgaa	tagtctagga	ttttagacac	ttcttaattt	300
tggtttacct	tttatgtcac	atattcttca	ttaatagtta	ttaatatgtt	gtatttttcta	360
gctgttcttg	caaaaagtag	ttttatttta	tggttcaaca	gtctcagcgt	caactgtgac	420
actttctgtg	tttggttttc	ttgttttgga	attgtttatc	ttgatgtgca	tcccatgtga	480
cattgttatg	tttctcaaaa	gattatttaa	atgttatgtg	tttttatgat	cactcgtttt	540
ttgcttcatg	catgcattat	tgctttaaac	attaaaaaat	acttgttttg	atgtgctttt	600

tatctttata tgtgaaaaat ctttgctggc taatatgtct tttgtcacia ttgtttcctc	660
cttaattctc ttaacgaatt aagagattat ttcattttct tctgtcattt tatgtggtag	720
aatacatctg aatctgtcct cttttttctt acatagggtt ttcattttct ttttctgctt	780
gaaattgccca acatatatct aaatgttgac ctacttagta ttatactgac tttggta	837

<210> 521

<211> 461

<212> DNA

<213> Unknown (H38g370 nucleotide)

<220>

<223> Synthetic construct

<400> 521

tgcaccatgt gtgtttggct cttagcttga gacaggcaaa tccacataca ctcacattcc	60
aacaagccaa agcaagtcac ccaccccat gcttctggga caaggatgta cattcctcct	120
ggcgctgggg gtgcgggtac cgcaaggga ataaattttt cctgagctac gatacactct	180
cccacaaaa gtcatacacc catttagata acaacttttc ttgagtagtt cagatatcat	240
caatgatcca catattgata aacatgactc gacactaata acactgtgag cattttacac	300
tattttctat aaactccact atgtccatt tattctcaga aattctctct atgatatact	360
tcatgggcac aaagaagaat gagtgaaagc cagcaaaaa ggactgtgaa agccactaaa	420
aagggctgga ataaatggga caaatcatca tactcttcta t	461

<210> 522

<211> 554

<212> DNA

<213> Unknown (H38g371 nucleotide)

<220>

<223> Synthetic construct

<400> 522

cctgtccacc cccgttcccc ccaccaccct ctctttcccc cttacatcta cccaaaaact	60
ttttccccac catctttccg caaaaccttc tctccctcct gtccaccacc gtttttcccc	120
ctccacctac ccccaacatt ttttccccac cgtcttttcc tcaactgtctt ttttgcaaca	180
ccttctcctg ctgcacctcc tcttttccct ttggcactaa ccacctctt tactcctcca	240
tctaccccaa aactattttc cccttcttac cgtctccagcc acactgcagt ctccgtcgt	300
gccaccaacc gcagcgaggc gagctgtggt gccgcagcca cagcctccag catgcagcgg	360
tggttagccc ttgtcctggt cctctaagcc gggaacggag cagccccgcg cgcagacacg	420
catgagccta gaacggcctg acacctcttc agcaccattt atatactgag gttatgcata	480
tgaggttccct ggactacatg ttccaggatt gggttaagaga aaacgcagag gcctactctg	540
attggacttt gtta	554

<210> 523

<211> 424

<212> DNA

<213> Unknown (H38g372 nucleotide)

<220>

<223> Synthetic construct

<400> 523

tatatagaaa tggacaacta ttttctaaca taactataac gatattttact atttttccat	60
tttataatct ctactcaata ttttgggtatt aaaaaattca tcctaacttc tttgttggct	120
tattgttttt gatgttcagc attactaaat ttttgactta tggtttgaaa tggctgtcga	180
ttcctgattg ctgatcctgg tatcaacatg cctgatttaa cccttaacaa attctattct	240
tacaaaatag ctgaagttgg ttggagggtt atttttacca tttcttttat ttgctgtccc	300
ttttgataaa attattttcc ttaggttaaaa aatgtattta aataagtaaa taatatctgt	360
gctagttggt actcgggtgga catttcagag gtgtgtccat actttatgta ttttatcact	420
gttt	424

<210> 524
 <211> 246
 <212> DNA
 <213> Unknown (H38g373 nucleotide)

<220>
 <223> Synthetic construct

<400> 524
 aatgtatttta ggtaatttct tgacttctgc agggactctg atatacacag agcgtacctg 60
 tgtatactgt ccagtttagct cagattctca gttttgggca ttttctaagg gagggcaatg 120
 aacatcctga taggtttaac taaggtttta aaatgtccaa ttttatgtgt ggtttttaac 180
 cacacctgca tcttaattac gaccttggct gttatagctt ataggtttag gcaatctgga 240
 tatagt 246

<210> 525
 <211> 619
 <212> DNA
 <213> Unknown (H38g374 nucleotide)

<220>
 <223> Synthetic construct

<400> 525
 gaaattatat tgattgggat ttctctcaaa ctaatctagt tgtattcacc attattaaaa 60
 ttaagtgaca ctcaattgga ctaagtagca ataaaaatat gagacttcct agtgattttt 120
 ttttatccca agccatttac tactgatggg ccttgatgtg tgtgcttgaa aacaaaacat 180
 atgcaagtgt tagactgggt tgaagatttg ggtgggtgaaa gtagctaat tagatgtcag 240
 tgctctatct agaagccaat cttggaaata tgtgataatg ccctttttaa atagctgaaa 300
 agaaattatt ttgtgtttgt ttctacttca ttctgtttg gttgtatagc atttaagtga 360
 aaggagattt tttatcctta tactagtatt tgcatttacc atcttttaat gatggagaga 420
 aaagttagtt gtcttacttt gatatgtttg gcataggacc tatgacactt ttgatgtttt 480
 tggtcacagt tctgtcacta gaatgctagc aattagatat atgcaatgag taacctactt 540
 taatacaatg gtttgaagta ccacaggcag taactcctaa acaccaaadc acagtgtttt 600
 aatttgtaac atgttaaag 619

<210> 526
 <211> 939
 <212> DNA
 <213> Unknown (H38g375 nucleotide)

<220>
 <223> Synthetic construct

<400> 526
 atgagaaatt tgagtggagg ccatgtcgag gagtttgtct tgggtgggttt ccctaccacg 60
 cctccccctcc agctgtcctt ctttgtcctt ttttttgcaa tttaccttct gacattgttg 120
 gagaatgcac ttattgtctt cacaatatgg cttgtctcaa gccttcacg tcccatgtac 180
 tttttccttg gccatctctc ttctctggag ctatggtaca tcaatgtcac cattcctcgg 240
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 ctgtacttct ttattgcctt agcctgtact gaatgtgtgc tgttggcagt tatggcctat 360
 gatcgctacc tggccatctg tggacccctc ctttacccta gtctcatgcc ttccagtctg 420
 gccactcgcc ttgtgtctgc ctcttggggc agtggcttct tcagctccat gatgaagctt 480
 ctttttattt cccaattgtc ctactgtgga cccaacatta tcaaccactt tttctgtgat 540
 atttccccac tactcaacct cacctgctct gacaaggagc aagcagagct agtagacttc 600
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 atcattgcag ccactcctgag gatccctacg tccaggggac gccacaaagc cttttccact 720
 tgtgcccgtc atctggcagt ggttgttatc tactactcct ccactctctt cacctatgca 780
 cggccccggg ccatgtacac cttcaaccac aacaagatta tctctgtgct ctacactatc 840
 attgtaccat tcttcaacct agccatctac tgcctgagga acaaggaggt gaaggaggcc 900
 ttcaggaaga cagtgatggg cagatgtcac tctctagg 939

<210> 527
 <211> 965
 <212> DNA
 <213> Unknown (H38g376 nucleotide)

<220>
 <223> Synthetic construct

<400> 527
 cacacagagc cactgaatct cacagggtgc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagccggg cctcgctttg ctctccctgt ccctgtccat gtatctgggc 120
 acgggtgctga ggaacctgct cagcatcctg gctgtcagct ctgactcca cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcggttacac ctcgccacag 240
 gttcccaaga tgattgtgga cagcgagtcg catggcagag tcatctctca tgctggctgc 300
 ctgacacaga tgtctttctt ggtccttttt gcatgtatag aagacatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt tgccctctgc actaccagc catcgtgaat 420
 cctcacctct gtgtcttctt cgttttggtg tcctttttcc ttagcctgtt ggattcccag 480
 ctgcacagtt ggattgtgtt acaattcacc atcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaactt gcctgttctg acagcgtcat caatagcata 600
 ttcatatatt ttgatagtag tatgtttggt tttcttccca tttcagggat ccttttgtct 660
 tactctaaaa ttgtccctct cgttctaaagg atgtcatcgt cagatgggaa gtataaagcc 720
 ttctccacct gtggctctca cctagcagtt gtttgctgat ttgatggaac aggcattggc 780
 atgtacctga cttcagctgt ggcaccaccc cccagggaatg gtgtcgtgga gtcagggatg 840
 tacgctgtgg tcaccccat gctgaacctt ttcatctaca gcctgagaaa caggcacaca 900
 caaagtgcc tgaggaggct gcgcacagaa cagttgaatc tcatgatctc ttgcacctt 960
 tttct 965

<210> 528
 <211> 557
 <212> DNA
 <213> Unknown (H38g377 nucleotide)

<220>
 <223> Synthetic construct

<400> 528
 ccagtacccc agcatctgtt cttcttctctg aaagtgaactg gccaccattg acctaaatca 60
 gaaacctatg atttgtcca gatttttctt tttcccttgc ttttcatatc tatcagtgtat 120
 actaattcta aactaacctt aacgaactgc atctgtgcc ctctctcatc tctctccct 180
 cactttcagt gcattgactg aggctacacc atgtgaatta ttaccatggc atgctaacag 240
 aattattgct tccaatggta ccatgccata attcatcctt catatgggtg ccaataaatt 300
 tttaaaatat ttatttgtat ctgctacttc tcagggttaa agcttccag catgttgaag 360
 atggaatgca aacagctctg catgcatgcc ctttgcctcat gcagctccta ttgtccatcc 420
 cccactctta cccactcttg ctggataatt cctttttatt ctttaagact catccaagaa 480
 gcaagctctc atatttcctt catatacttc tgtcatagcc ctttacatat gttaatcatc 540
 tgttaccttt tctcttg 557

<210> 529
 <211> 1007
 <212> DNA
 <213> Unknown (H38g378 nucleotide)

<220>
 <223> Synthetic construct

<400> 529
 tctagagacc cacagaatct aacagatgct tctatattcc tcctcctaga agctcagagg 60
 atccagaacg gcagccgggc ctactgggc tgttctgtc cacgtgcctg gtcattggcg 120
 tggggaacct gctcatcatc ctggccatca gccctgactc ccacctccac acccccatgt 180
 acttcttctt ctccaacctg tccttgccctg acatcagttt cacctccacc acagtcccca 240

agatgactgt	ggacatccaa	tctcacagca	gagtcacctc	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggaagacag	acatactcct	gagtgtgatg	360
gcctatgacc	agttttagtc	caaattgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gctttctact	tttgttgtct	tttttttttc	cctcagtcct	ttagatgccc	480
agctgtacaa	tttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
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taatcctgta	tttccctgat	gccatatttg	gttttcttcc	catctcgggg	acacttttct	660
cttacgataa	aattgtttcc	tccattctga	gggtttcatc	atcaggtggg	aagtataaag	720
ccttctccac	ctatgggtct	cacctgtcag	atgtttcctg	attttatgga	acaggcggtg	780
gagggtagct	cagttcagat	gtgtcatctt	ccccgagaaa	gactgcagtg	gcctcagtga	840
tgtacgcagt	ggtcaccccc	atgatgaacc	ccttcatcta	cagtccgaga	aacagggata	900
tgaaaagtgt	cctgcggcgg	ccgcacggca	gcacgttcta	atctcaatac	cttcttatct	960
gttccattcc	ttttgcagtg	tgggtcgaaa	aaggctgcat	gatgaaa		1007

<210> 530

<211> 471

<212> DNA

<213> Unknown (H38g379 nucleotide)

<220>

<223> Synthetic construct

<400> 530

tttttaaaaa	tgagattaaa	ggaattaatg	taagatagaa	ccataatgga	ttattggagg	60
gaaggtaggc	acatttaggg	gatgttcttg	gcctttccgt	ttggctgacc	tatcccaaaa	120
cttttctctt	gggtctctat	cagagacatg	gcagtaacct	ggatggacca	taggcacgag	180
tcctgtagcc	cattcctccc	gaagctgcag	cctttttcat	cctgccatgt	atctgagtta	240
tgcacgtgcc	ttgacacctt	cactaaatca	tatataactt	gaatccgggg	actcaagggt	300
ttcaaccate	tttgttttct	tctccattac	tgtcactgtg	ctagagccca	agtctcctga	360
aatgcgccct	ggagccttgc	tcaaagatgt	caacccaaca	tgctgatcag	gtagctattt	420
tgtctgaagc	tggtagttca	tgacaggctc	tgacatgtgc	tgagcttgct	c	471

<210> 531

<211> 974

<212> DNA

<213> Unknown (H38g380 nucleotide)

<220>

<223> Synthetic construct

<400> 531

atgaagatca	accagacaat	cctgaaggaa	ttcattcttg	ttggcttttc	tgtgtaccca	60
catgtacaga	catttctttt	tgtggtcttc	ttttgtctct	accttctcac	ccttgcaggt	120
aatctgacca	tcatgggtct	aacttgagtg	gacaggctcc	tccacacccc	tatgtatctc	180
ttccttagtg	cactctcctt	ctctgagacc	tgctatacac	tgaccatcgt	ccccaaagatg	240
ctggaagatc	tactggccaa	ggacagaagc	atttcagtc	cagggtttag	cttacagatg	300
tgttcttctt	tgggacttgg	tggcacaaac	tgtatcatte	tcactttgat	gggatatgac	360
cgcttctctg	ccatttgtaa	ccctctaaga	tatccactgc	ttatgaccaa	cattgtatgt	420
ggacaacttg	tggcctctgc	ttgcaactga	ggcttcttta	tctctcttac	agagactgca	480
ctgatattca	gggactcttt	ctgcagaccc	aaccttgtca	aacacttctt	ctgccatatg	540
ctggcagtta	ttaggctgtc	ttgtatagac	agtaaccaca	cagaattcat	tataacactg	600
atctcagtg	ctgggtttgt	gggtaccctt	ctgctcatca	tcttgactga	tgtcttcatt	660
atttctactg	tcctcaggat	cccttcagct	gagggcaagc	agaaggcctt	caccacctgt	720
gcctcccacc	tcaccgtgg	tataatccac	tttggttttg	catctattgt	ttatttgaag	780
ccagaagcct	caggagatga	cacactcata	gcagtcctt	atactgtcat	taccccttct	840
ctcagcccca	tcatattcag	cctgaggaat	aaggacatga	aaaatgcttt	tagaagaatg	900
atgggaaaca	cagttgcctt	gaaaaaataa	tcttgggttg	ttgctgcttg	tttgaagaag	960
ggctcaatgt	cccc					974

<210> 532

<211> 939

<212> DNA

<213> Unknown (H38g381 nucleotide)

<220>

<223> Synthetic construct

<400> 532

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ggggagttgc	agctccttct	ctttgccttg	ttcctctctc	tgtatctagt	cactctgacc	120
agcaatgtct	tcattatcat	agccatcagg	ctggatagcc	atctgcacac	ccccatgtac	180
ctcttccttt	ccttcctatc	cttctctgag	acctgctaca	ctttgggcat	catccctaga	240
atgctctctg	gcctggctgg	gggggaccag	gctatctcct	atgtgggctg	tgctgcccag	300
atgttctttt	ctgcctcatg	ggcctgtact	aactgcttcc	ttctggctgc	catgggcttt	360
gacagatatg	tggccatctg	tgtctccactc	cactatgcca	gccacatgaa	tcctaccctc	420
tgtgcccagc	tggtcattac	ttccttctctg	actggatacc	tctttggact	gggaatgaca	480
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acgccacctg	tgtctgagct	agcctgtgga	gatacaggcc	cgagtgcgct	gaggatcttt	600
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atcttggcag	caatactgag	gatccctctc	gctgaggggc	agaagaaggc	cttctccact	720
tgtgcctcgc	accttacagt	ggtcattatt	cattatggct	gtgcttcctt	cgtgtacctg	780
aggcccaaag	ccagctactc	tcttgagaga	gatcagctta	ttgccatgac	ctatactgta	840
gtgaccccc	tccttaatcc	cattgtttat	agtctaagga	ctagggctat	acagacagct	900
ctgaggaatg	ctttcagagg	gagattgctg	ggtaaaagga			939

<210> 533

<211> 866

<212> DNA

<213> Unknown (H38g382 nucleotide)

<220>

<223> Synthetic construct

<400> 533

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gtgttctttg	ccatcaaact	ggattttctg	ctgcacagct	ccttgatatt	cttcatcagt	120
gtcctctcct	tcctagagat	ctggtatacc	accatcacca	tccccaagat	gttcttcaac	180
ctagccagtg	agcagaagac	cacctccctg	gatggttgcc	tattgcagat	gtatttcttt	240
tactccctcg	gcatactga	ggtttgcctg	ctcaccacca	gggctatgga	cagataacctg	300
gccatctgta	atcacctttg	ctacccccaca	gtcacgacac	cttagctcta	cactcagggtg	360
attctagggt	gttgcatctg	tggcttcttc	acgctgctcc	ctgagattgc	ttggatatcc	420
acactgccat	tttgtggctc	aaatcaaata	cacaacattt	tctgtgacct	tgatccctatc	480
ctgaatctag	catgtgtaga	cactggccca	gttgttttaa	tcaaggttgt	ggacattgta	540
catgctgtgg	agatcatcac	agctataatg	cttgtgactt	tggcttacgt	ccaaattatt	600
gcagtgatcc	taagaaactg	ctctgctgat	ggatgccaaa	aggcattttc	tacctatgct	660
ttccaccttg	ctattttctt	aatctttttt	ggaagtgtag	ccctgatgta	cctgctcttc	720
tctgccaaag	actccttttt	ctgggacaca	accatcagcc	taatgtttgc	agtgtgtgta	780
ccgacacaat	catctgtagt	ctgaggaata	aagagataaa	ggaagcaata	aaaaagcaca	840
tgtgccaatc	aatgatatgc	acacat				866

<210> 534

<211> 954

<212> DNA

<213> Unknown (H38g383 nucleotide)

<220>

<223> Synthetic construct

<400> 534

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tgggttaagt	ctgttgtctg	ctttgttcca	ctgctcttca	tctatgcttt	cattgttggt	120
ggaaacctgg	tcatactcac	agtggtccag	ttgaatactc	acctccacac	tcccatgtat	180

acttttatca	gtgctctttc	tttcctggag	atttgggtata	ccacagccac	aatcccaaag	240
atgctgtcta	gcctgcttag	tgagaggagc	atttccttca	atgggtgtct	cctgcagatg	300
tatttcttcc	attccaccgg	catctgtgag	gtgtgtctct	tgacagttat	ggcctttgac	360
cactacctgg	ccatatgcag	ccctcttcat	tatccctcta	tcatagacccc	caagctatgt	420
acccaactga	ctttaagttg	ctgtgtttgt	ggctttatca	caccccttcc	tgagattgcc	480
tggatctcta	cactgccatt	ttgtggttcg	aatcaccttg	aacatatctt	ctgtgacttc	540
ctcccagtgc	tgcgtctggc	ctgcacagac	acacgagcca	tcgtcatgat	tcaggtagtg	600
gatgtcattc	atgcagtgga	gattattaca	gctgtgatgc	tcattctcat	gtcctacgat	660
ggatttggg	ctgtaattct	acgtattcat	tcagctggag	gccgccgcac	agcattttcc	720
acgtgtgtct	ctcacttcat	tgtcttttcg	ctcttctttg	gcagtgtgac	tctcatgtac	780
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gttttgtctc	ccttcttcaa	ccccattatc	tatagcctga	ggaataaaga	aataaaaaga	900
gctataaaaa	agcacatagg	tcaagctaag	atattttttt	ccgtaagacc	aggg	954

<210> 535

<211> 386

<212> DNA

<213> Unknown (H38g384 nucleotide)

<220>

<223> Synthetic construct

<400> 535

ctactgaaac	tctcctgctc	agacacacac	ctcaatgagg	tcataatcct	tagtgagggt	60
gccctgggtca	tgatcacccc	atttctttgc	atcctggctt	cttatatgca	catcacctgc	120
actgtcctga	aggtcccatc	cacaaaggga	aggtggaaag	ccttctccac	ctgtggttct	180
cacctggctg	tggttctcct	cttctacagc	accatcattg	ctgtgtattt	taacctctg	240
tcctcccaact	cagctgagaa	agacactatg	gctactgtgt	tgtatacagt	agtgactccc	300
atgctaaacc	ctttatctac	agcctgagga	acagggtactt	gaaaggggct	ctgaaaaaag	360
tagttggcag	ggtgggtggtt	tctgtc				386

<210> 536

<211> 486

<212> DNA

<213> Unknown (H38g385 nucleotide)

<220>

<223> Synthetic construct

<400> 536

ctgctcatca	tcccagccat	tgccactgac	acccggctct	ctgtgctcgt	gcgctttttc	60
cttgccaacc	tggccttcgt	ggtcacttgc	ttcacctcca	ccaccatccc	caagatgctg	120
gacgtgcaaa	gagatccctt	gtgtcatgtc	aggatgcaaa	gggattcctt	atgctgggtg	180
cctgacccag	atgctcttct	tcattctgtta	ggcatccaca	gcttcttctg	gactgcaatg	240
gccaatgaac	actgtgtggc	catctgtcac	tctctgaact	ccatcaggtc	tgtgacacca	300
tagctctgtg	gcctcctggg	ggtggcctcc	tggaccttcg	cattcaggaa	tgccctgacc	360
cacccagtgt	tactgaccgg	cctctcactc	tgcacctacg	agtgggtcag	ccatgtcttc	420
tgcaacctca	gccagctgct	gaagttggcc	tgctcagacg	ccactctcaa	caatgtgacg	480
gtgcaa						486

<210> 537

<211> 980

<212> DNA

<213> Unknown (H38g386 nucleotide)

<220>

<223> Synthetic construct

<400> 537

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ggcctggaat	ccctgcacat	ctggctctcc	atcccccttg	gctccatgta	cctggtagct	120

gtgctgggga	acataaccat	cctggcagtg	gtaaggatgg	agtacagcct	gcatcagccc	180
atgtacttct	tcctgtgcat	gttggctgtc	attgacttgg	tcctgtcaac	ctctaccatg	240
cccaaactac	tggccatctt	ctggtttggt	gcccacaaca	ttgggtgtta	tgccctgtttg	300
gccagatgt	tcttcattca	ttgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	actatgtggc	catctgtgac	ccactgcac	ataccttggt	gtcacccat	420
gctgtggtgg	gtcgtttggg	gctggctgcc	ctcctccggg	gggtaatcta	cattggacct	480
ctgcccctag	tgatttgtct	gaggttgccc	ctttaccaca	cccaaatacat	tgcccattcg	540
tactgtgagc	acatggctgt	ggtcaccttg	gcatgtgggtg	tgacacaagg	gtcaacaact	600
tatatggaat	ggggattggc	tttctgggat	taatcctgga	ttcattggcc	atcactgcct	660
cctatgtgat	gattttcagg	gctgtaatgg	gcttggccac	ctctgaagcc	aggcttaaaa	720
ccttagggac	atgtggctct	cacatctgtg	ccatcctcgt	cttctacatc	cccattgctg	780
tttctctct	cacacaccgc	tttggccatc	gtgtgcctcc	ccatatccat	atccatatcc	840
atatccatat	ccatatccat	atccttttgg	ccaacattta	cctcctcatc	ccacctatcc	900
tcaacccaat	agtctatgct	gtccgcacaa	agcagatccg	agaggctctt	ctccatatta	960
aggcaaggac	tcaaaccagg					980

<210> 538

<211> 967

<212> DNA

<213> Unknown (H38g387 nucleotide)

<220>

<223> Synthetic construct

<400> 538

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gagttggcga	gttccctctt	ctcagcatca	ccagtgactc	agagaagcag	caggccctct	120
tctggctctt	cctgtgtatg	cacttagtca	ctgaggctgg	aaacacaccc	atcatcctgg	180
gcatcggtc	caaccctcgc	ctgcacaccc	ccacgtactt	cttcacccat	ctctcctttg	240
tcaacatctg	cttcatcacc	aacctgatcc	ccaagctcct	ggtcaaccat	gtggcaggaa	300
cagggatgat	cacgatctct	tctccccagt	gcctgactca	gatgtacttc	ctcatctcct	360
ttgccaacgt	ggacaccttt	ctgctggcca	tcatggcact	ggaccactat	gtggccatct	420
gcagcgccct	gcgggtactgc	tccatcatca	cccccggtc	tgtcaggggc	tggccgtgct	480
agcgtgagca	ggctccagcc	tcattctcct	ggctccacag	gtcatcatga	gcagactggc	540
cttctgctcc	tccgcccaga	tttcacactt	ctactgtgac	gcctacctgc	tcattgaagat	600
tgccctgctca	catacatgtc	aatcagcatg	tgttcctggg	ggccgtgggtc	ctgttcctgg	660
ctccctgtgc	gtcattcttg	gtctcctaca	tccgcattgc	tgcagccatc	ctccggatct	720
cctctcctac	aagaaggcgc	aaggcatggt	ccatatgtag	ctcccacctg	tctctgggtca	780
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aggacaccat	agcaaccatc	atgtacactg	tggtagacctc	tatgctaaac	cccttcattct	900
acagtctgat	gaacaaggag	gtccaggagg	ccgtgagaag	gctcttcagt	aggggctcac	960
actcatc						967

<210> 539

<211> 603

<212> DNA

<213> Unknown (H38g388 nucleotide)

<220>

<223> Synthetic construct

<400> 539

cttcattttt	gtgggataga	tgtgacctca	taccaggctt	gacagatatt	ggcatagcaa	60
cccctacgac	actacataat	gtgggcaacg	cattgtcgca	ttatgctgtc	gcatgggaat	120
tgctttctcc	attcggttag	ccagttggcc	tttggcgtgc	acttaccctt	ctgtgggtccc	180
aatgagttcg	atagttttta	ttgtgacctt	cctagggtaa	tcaaacttgc	ctgtacagat	240
acctacaggc	tagatattat	ggtcattgct	aacagtggtg	tgctcactgt	gtgttctttt	300
gttctttctaa	tcattctcata	cactatcatc	ctaataacca	tccagcatcg	cccttttagat	360
aagtcgtcca	aagctctgtc	cactttgact	gctcacatta	cagtagttct	tttgttcttt	420
ggaccatgtg	cttttattta	tgcttggtcca	ttccccatca	agtcattaga	taaattcctt	480
gctgtatttt	attctgtgat	caccctcttc	ttgaacccaa	ttatatacac	actgaggaac	540

aaagacatga agacggcaat aagacagctg agaaaatggg atgcacattc tagtgtaaag 600
 ttt 603

<210> 540

<211> 935

<212> DNA

<213> Unknown (H38g389 nucleotide)

<220>

<223> Synthetic construct

<400> 540

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gggctggagt	ccctacacgt	ctggctctcc	atcccctttg	gctccatgta	cctgggtggct	120
gtgggtggga	atgtgacat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatctt	ctggttcggg	gcttgtgaca	ttggcctgga	cgcttgcttg	300
ggccaaatgt	tccttatcca	ctgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	gctacgtggc	catctgcaac	ccactacgtc	atagcatggg	gctcacttat	420
acagtgggtg	gtcgtttggg	gcttgtttct	ctcctccggg	gtgttctcta	cattggacct	480
ctgcctctga	tgatccgcct	gcggtgccc	ctttataaaa	cccatgttat	ctcccactcc	540
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catggggaca	ggcgaatatc	acatatgtgc	catcatgata	ttataggatc	ccagtgatgt	780
atattccatg	agatcaccga	gatggctcagt	gtgtgcatca	tccagtccac	aatatgatgg	840
ccaggatata	tatcatcagt	catccaagca	tcaagccag	tgtataggat	gatcgcacca	900
agcagagccg	agagagctat	atccaaagag	caaga			935

<210> 541

<211> 945

<212> DNA

<213> Unknown (H38g390 nucleotide)

<220>

<223> Synthetic construct

<400> 541

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cacagtactg	ctgaccttgt	cctcttctcc	gtgggttatg	cggtcttcac	agtggccctc	120
tgtgggaatg	tcctcctcat	cttctcctac	tacatggacc	ctcaccttca	cacccccatg	180
tacttcttcc	tcagccagct	ctccctcatg	gacctcatgt	tggtctgtac	caatgtgcca	240
aagatggcag	ccaacttcct	gtctggcagg	aagtccatct	cctttgtggg	ctgtggcata	300
caaattggcc	tctttgtctg	tcttgtggga	tctgaggggc	tcttgtctgg	actcatggct	360
tatgaccgct	atgtggccat	tagccacca	cttactatc	ccatcctcat	gaatcagagg	420
gtctgtctcc	agattactgg	gagctcctgg	gcctttggga	taatcgatgg	cttgatccag	480
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acctgtcctc	cccacctgac	agctgtcacc	ctcttctatg	gggcagccat	gttcatctac	780
ctgaggccta	ggcactaccg	ggcccccagc	catgacaagg	tggcctctat	cttctacacg	840
gtccttactc	ccatgctcaa	ccccctcatt	tacagcttga	ggaacaggga	ggatgatggg	900
gcactgagga	aggggctgga	ccgctgcagg	atcggcagcc	agcac		945

<210> 542

<211> 975

<212> DNA

<213> Unknown (H38g391 nucleotide)

<220>

<223> Synthetic construct

<400> 542

atgggaagat	gggtgaacca	gtcctacaca	gatggcttct	tcctcttggg	catcttttcc	60
cacagccaga	ctgaccttgt	cctcttctct	gcagttatgg	tggctttcac	agtggccctc	120
tgtgggaatg	tcctcctcat	cttcctcatc	tacctggacg	ctggacttca	cacccccatg	180
tactttctcc	tcagccagct	ctccctcatg	gacctcatgt	tggctctgtaa	catttgtgcca	240
aagatgcagc	caacttctctg	tctggcagaa	gtccatctcc	tttgtgggct	gtggcataca	300
aattggcttt	tttgtctctc	ttgtgggatc	tgaggggctc	ttgctgggac	tcattggctta	360
tgaccgctac	gtggccgtta	gccaccact	tcactatccc	atcctcatga	atcagagggt	420
ctgtctccag	attactggga	gctcctgggc	ctttgggata	atagatggag	tgattcagat	480
ggtggcagcc	atgggcttac	cttactgtgg	ctcaaggagc	gtggatcact	ttttctgtga	540
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tgcctgctgt	gtcttcatgc	ttctccttcc	cttctccatc	atcatggcct	cctatgcttg	660
catectaggg	gctgtgctcc	gaatacgtct	tgctcaggcc	tggaaaaaag	ccctggccac	720
ctgctctctc	acctaacagc	tgtcaccctc	ttctatgggg	cagccatggt	catgtacctg	780
aggcctgac	gctaccgggc	ccctagccat	gacaagggtg	cctctatctt	ctacacagtc	840
cttactccca	tgctgaaccc	cctcattttac	agcttgagga	atggggaggt	gatgggggca	900
ctgaggaagg	ggctggaccg	ctgcaggatt	ggcagccagc	actgaacccc	agagtctggt	960
gcctgctgtg	ccccct					975

<210> 543

<211> 942

<212> DNA

<213> Unknown (H38g392 nucleotide)

<220>

<223> Synthetic construct

<400> 543

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tcaggatcac	gccagctcct	cttctccctg	gtggctgtca	tgtttgtcat	aggccttctg	120
ggcaacaccg	ttcttctctt	cttgatccgt	gtggactccc	ggctccacac	acccatgtac	180
ttcttgctca	gccagctctc	cctgtttgac	attggctgtc	ccatgggtcac	catccccaag	240
atggcatcag	actttctgcg	gggagaaggt	gccacctcct	atggagggtg	tgcagctcaa	300
atattcttcc	tcacactgat	gggtgtggct	gagggcgctc	tgttgggtcct	catgtcttat	360
gaccgttatg	ttgctgtgtg	ccagccctg	cagtatcctg	tacttatgag	acgccaggta	420
tgtctgctga	tgatgggctc	ctcctgggtg	gtagggtgtg	tcaacgcctc	catccagacc	480
tccatcaccc	tgcattttcc	ctactgtgcc	tcccgatttg	tggatcactt	cttctgtgag	540
gtgccagccc	tactgaagct	ctcctgtgca	gatacctgtg	cctacgagat	ggcgtgtgcc	600
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gtgccttgcg	cctaccacag	tccacagcag	gataacgtgg	tttccctctt	ctatagcctt	840
gtcaccccta	cactcaaccc	ccttatctac	agtctgagga	atccggaggt	gtggatggct	900
ttgggtcaaag	tgcttagcag	agctggactc	aggcaaatgt	gc		942

<210> 544

<211> 350

<212> DNA

<213> Unknown (H38g393 nucleotide)

<220>

<223> Synthetic construct

<400> 544

aatattaagg	gcattgctgg	tgcccatggt	tattgaagtg	ttggatctat	tctttatcat	60
cctatcttat	atctttatcc	cttcaggcag	ttctacaact	ctcctctcag	aggcccgtca	120
caaagcattt	gggacatgtg	tctctcacat	agggtccatc	ttagccttct	acacaccttc	180
agtcattctt	tcagtcattg	accgtgtggc	ccgtgtgtgt	gcgccacacg	tccacattct	240
cctcgccaat	ttctatctgc	tcttccacc	catggtcaat	cccatcatct	acggcgtaa	300

gaccaagcag atccgtgaca gtcttgggag tattcccgag aaaggatgtg

350

<210> 545

<211> 948

<212> DNA

<213> Unknown (H38g394 nucleotide)

<220>

<223> Synthetic construct

<400> 545

atgcctagtc	agaactatag	catcatatct	gaatttaacc	tctttggctt	ctcagccttc	60
ccccagcacc	tcttgcctat	cttgttccctg	ctgtacctcc	tgatgttccct	gttcacattg	120
ctgggcaacc	ttctcatcat	ggccacaatc	tggattgaac	acagactcca	cacacccatg	180
tacctcttct	tgtgcaccct	ctccgtctct	gagattctgt	tcactgttgc	catcacccct	240
cgcatgctgg	ctgatctgct	ttccacccat	cattccatca	cctttgtggc	ttgtgccaac	300
cagatgttct	tctccttcat	gtttggcttc	actcactcct	tccttctcct	ggtcatgggc	360
tatgatcgct	atgtggccat	ctgccaccca	ctgcgttaca	atgtgctcat	gagccccctg	420
gactgtgccc	atcttgtggc	ctgtacctgg	gctgggtggt	cagtcatggg	gatgatgggtg	480
acaacgatag	ttttccacct	cactttctgt	gggtctaatg	tgatccacca	ttttttctgt	540
catgtgcttt	ccctcttgaa	gttggcctgt	gaaaacaaga	catcatctgt	catcatgggt	600
gtgatgctgg	tgtgtgtcac	agccctgata	ggctgtttat	tcctcatcat	cctctcctat	660
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tctacgtgtg	tatccacct	cactgtgggtg	gtcacgcact	atagttttgc	ctcctttatc	780
tacctcaagc	ccaagggcct	ccattctatg	tacagtgcag	ccttgatggc	caccacctat	840
actgtcttca	cccccttct	tagcccaatc	attttcagcc	taaggaacaa	ggagctgaag	900
aatgccataa	ataaaaaactt	ttacagaaaa	ttctgtcttc	caagttcc		948

<210> 546

<211> 990

<212> DNA

<213> Unknown (H38g395 nucleotide)

<220>

<223> Synthetic construct

<400> 546

atgtgttctt	ttttcttgtg	ccaaacaggt	aaacaggcaa	aaatatcaat	gggagaagaa	60
aaccaaacct	ttgtgtccaa	gtttatcttc	ctgggtcttt	cacaggactt	gcagacccag	120
atcctgctat	ttatcctttt	cctcatcatt	tatctgctga	ccgtgcttgg	aaaccagctc	180
atcatcatte	tcattcttct	ggattctcgc	cttcacactc	ccatgtattt	ttttcttaga	240
aatctctctc	ttgcagatct	ctgtttctct	actagcattg	tccttcaagt	gttgggtcac	300
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ctgaagctgg	cttccataga	cacttacagc	acagaaatgg	ccatcttttc	aatgggcgtg	660
gtaatcctcc	tggccctgt	ctccctgatt	cttggttctt	attggaatat	tatctccact	720
gttatccaga	tgcagtctgg	ggaagggaga	ctcaaggctt	tttccacctg	tggctcccat	780
cttattgttg	ttgtcctctt	ctatgggtca	ggaatattca	cctacatgcg	accaaactcc	840
aagactacaa	aagaactgga	taaaatgata	tctgtgttct	atacagcggt	gactccaatg	900
ttgaacccca	taatttatag	cttgaggaaac	aaagatgtca	aaggggctct	caggaaacta	960
gttggggagaa	agtgtcttct	tcataggcag				990

<210> 547

<211> 676

<212> DNA

<213> Unknown (H38g396 nucleotide)

<220>

<223> Synthetic construct

<400> 547

ggaaaggaaa	gagagacacg	ggctctggagg	ccgagagcgc	aagaccgggg	ggtagcacc	60
cggcacgctg	cgagggtaac	aagctatcag	gaatgcgggg	tccgtggcgg	gggagtgttg	120
tgggcgcggt	taggccgagt	ccttttagacg	cccagctgca	caacgtgatt	gcctacagaa	180
ggacctgctt	caaggatgtg	gaaattccga	atttcgctgt	gacccttctc	aattccccgt	240
cttgcattgt	tggcaccttc	accaataaca	taatcatgta	tttccctgct	gccatatttg	300
gttttcttcc	catctcgggg	acccttttct	cttacgataa	aattgttttc	tccattctga	360
gggtttcatc	atcaggtggg	aagcataagg	ccttctccac	caggggggtct	cacctgtcag	420
ttgtttgctg	attttatgga	acaggcattg	gaggctacct	cagttcagat	gtgtcatctt	480
ccccgagaaa	ggctgcagtg	gcctcagtg	tgtacacggt	ggccatcccc	atgctgaacc	540
ccttcatcta	cagcctgaga	aacagggata	ttaaaagtgt	cctgcggcac	cgcacggcag	600
cacggtctca	tctcaatata	ttcttatctg	ttccattcct	ttttagtgtt	gggttaaaaa	660
aggcagcaag	gtcaaa					676

<210> 548

<211> 992

<212> DNA

<213> Unknown (H38g397 nucleotide)

<220>

<223> Synthetic construct

<400> 548

atgaaaatct	tcaacacccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
ttcccttgcc	ccaggggagg	acagatcctc	ctcgttgtgc	tcttcaactgt	tgtttacctc	120
ctgaccctca	tgggcaatgg	ttccatcaac	tgtgctgtgc	actgggtcag	agactccatg	180
cccccatgta	catcctgtct	gccaacttct	ccttctctgga	gatctgttat	gtcacctcta	240
cagtccccaa	cgtgctggcc	aacttctctt	ctgacacaag	atcatctcgt	tctctggctg	300
cttctcccaa	ttctactttt	ttttctcctt	gggctctaca	gaatgctttt	tcctgggagc	360
tatggcattt	gacctatacc	ttgccatctg	ccggcctcta	cgctatccaa	ccattatgac	420
cagacgtctc	tgcaacattc	ttgtgggcag	ctgctgggta	cttgggtttct	tgtggttcct	480
gattcctatc	agtgtcattt	ctcaaatgac	ctgtggatct	aggattattg	accacttccc	540
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tagctccacc	ttaagttctc	tacttctatt	tattcccttt	ctcttcatcg	tgggggtgcta	660
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tctgtgggtc	ctcccccttat	taatcctgtc	atatacagtc	tgaggaacaa	ggaaatgaaa	900
catgcaatga	ggaactacac	tgtaatgttt	tattttctag	aattcatagg	gctacaagag	960
atgtcaaaga	tgtattctat	ctctttaatt	tt			992

<210> 549

<211> 805

<212> DNA

<213> Unknown (H38g398 nucleotide)

<220>

<223> Synthetic construct

<400> 549

ttctcaagta	tatatgcttg	tatatatcag	atctctatct	caactatcta	tctaatcatc	60
tatctatatt	taaattagta	gactggatta	tcaattgtta	tttgtattat	attttacagc	120
ctactcactt	tattctagca	gttcattttac	acttgtgaaa	tgaatcaatt	taaatagtaa	180
caaaatagga	acaatctgac	aacttttttag	ggatacttct	actcaggaat	atgtggcagg	240
agaaaactgta	caatgtgatt	gataacaatc	ttcattttga	aatattgcta	gcatggcttc	300
atcacaattc	actctgtcat	ggacagtggt	cagcacttgg	ccatctgcca	cccactgcac	360
taccttatcc	tcatgactga	tgaaaataga	gatcgaatgt	ttatgggccc	gctgacagcc	420
tttccttaca	ccgatgccac	atctcagaac	atgcactatg	taaattttct	tattatcatt	480
ctcagtattt	tgtacatccc	tggaccatat	acgttgatcc	taagagctat	gcttcagctg	540

ctttcagcag	ctagccatca	aaatgccttt	tctatccgtg	ggctctcactt	aatagtgggtg	600
tctctgtttct	gtgaaacccat	atgatgatgt	gtgtgaaatct	catatctgac	catttagtat	660
aaatgaagat	gacaaatcac	aatatcataa	tgatatcctc	cataaagact	ctagtttttaa	720
actttgtcaa	ttacacctta	ctcaatatga	acttaaaacc	tatcttcagt	ttttttttta	780
tggaatgagt	attagccaaa	gctca				805

<210> 550

<211> 933

<212> DNA

<213> Unknown (H38g399 nucleotide)

<220>

<223> Synthetic construct

<400> 550

atgaaaatct	tcaacagccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
ttcccttgcc	ccaggagg	gcagatcctc	ctctttgtgc	tcttcaactgt	tgtttacctc	120
ctgaccctca	tgggcaatgg	ttccatcatc	tgtgctgtgc	actgggatca	gagactccac	180
gcccccatgt	acatcctgct	cgccaacttc	tccttcttgg	agatatgtta	tgtcacctcc	240
acagtccecca	gcatgctggc	caacttcctc	tctgacacca	agatcatctc	gttctctggc	300
tgtctcctcc	agttctactt	tttcttctcc	ttgggctcta	cagaatgctt	tttctctggca	360
gttatggcat	ttgatcgata	ccttgccatc	tgctggcctc	tacgtatcc	aaccattatg	420
accagacgtc	tctgtaccaa	tcttgtggtc	aattgctggg	tacttgggtt	catctgggtc	480
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ttcctatgtg	accagctcc	tcttctaact	ctcacttgca	aaaaaggccc	tgtgatagag	600
cttgtctttt	ctgtcttaag	tcctctgcct	gtctttatgc	tctttctctt	cattgtgggg	660
tcctatgctc	tggctgtgag	agctgtgttg	agggtccctt	cagcagctgg	gagaagaaag	720
gctttctcca	cctgtgggtc	tcacctggct	gtggtttcac	tggtctacgg	ctcagtactg	780
gtcatgtatg	ggagcccacc	atctaagaat	gaagctggaa	agcagaagac	tgtgactctg	840
ttttattctg	ttgttaccac	actgcttaac	cctgtgatat	atagtcttag	gaacaaagat	900
atgagaaaag	ctctgaagaa	attttgggga	aca			933

<210> 551

<211> 977

<212> DNA

<213> Unknown (H38g400 nucleotide)

<220>

<223> Synthetic construct

<400> 551

acagccctgg	aattcacaaa	caattcagag	acaagcacta	tgacggaatt	tgttctcctt	60
ggctttcctg	gttgtcagga	gatgcaaatg	ttcctcttct	ccctgttctt	tgtgatctat	120
gtatttacca	taataggaaa	tgggaccatt	gtctgtgctg	tgagattgga	caaacggctt	180
cataccccaa	tgtatatctt	cctagggaac	tttgccttcc	ttgaaatccg	gtaagttact	240
tccactgtac	ccaacatgct	agtcaacttc	ctctcagaga	caaaaacccat	ctcttttgtt	300
ggctgtttcc	tccagttcta	cttttttact	tccttgggta	caatagaagc	atacttctc	360
tgcatcatgg	catatgatcg	gtaccttgct	atctgccgcc	cattgcacta	cccaaccatc	420
atgaocccac	aactctgcta	catattgatg	tctttttgct	gggtgttttg	attcctcagt	480
tactctgtct	ccactgtgca	actgtctcaa	ctgcctttct	gtgggcccac	catcatcaat	540
cactttttgt	gtgacatgga	cccactgatg	gctctgtcct	gtgcctcagc	tcctatcact	600
gagattatct	tctatatcct	gagctccctc	attatcattc	tcactcttct	gtacatctgt	660
ggctcctata	tgctttactg	atagctgtat	taaaagtccc	ttcagcagct	ggccagcaga	720
aggccttttc	cacctgtgga	tctcatctga	cagtgggtgtg	tttattcttt	ggggccctac	780
tggcaatgta	tgtgagcccc	acaactgata	accagctgc	aatttagaag	attataactt	840
tgttctatct	tgtgggtgacc	cccttcttaa	acccctgat	ttacagctta	cgaaacaaag	900
agatgaaggc	tgcgttgaag	aaagtcctga	ggatagaatg	agaataaagt	catctacatg	960
agaccaagca	aaccatt					977

<210> 552

<211> 945

<212> DNA

<213> Unknown (H38g401 nucleotide)

<220>

<223> Synthetic construct

<400> 552

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caggatggta	gtctcctgta	cttcttttct	ttacttttca	tctatacttt	tattatcatt	120
gataacttat	taatcttctc	tgctgtaagg	ctggacaccc	atctccacaa	ccccatgtat	180
aattttatca	gtatattttc	ctttctggag	atctggtaca	ccacagccac	cattcccaag	240
atgctctcca	acctcatcag	tgaaaagaag	gccatctcaa	tgactggctg	catcttgcag	300
atgtatttct	tccactcact	tgaaaactca	gaggggatct	tgctgaccac	catggccatt	360
gacagatacg	ttgccatctg	caaccctctt	cgctatcaaa	tgatcatgac	cccccggtc	420
tgtgctcaac	tctctgcagg	ttcttgcttc	ttcggtttcc	ttatcctgct	tcccagagatt	480
gtgatgattt	ccacactgcc	tttctgtggg	cccaaccaaa	tccatcagat	cttctgtgac	540
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gtcactgtga	tattgaggat	tccctcttct	gaagggaggc	aaaaggcttt	ttctacctgt	720
gcaggccacc	tcatggtctt	cctgatattc	tttggcagtg	tatcactcat	gtacttgcgt	780
ttcagcgaca	cttatccacc	agttttggac	acagccattg	cactgatgtt	tactgtactt	840
gctccattct	tcaatcccat	catttatagc	ctgagaaaca	aggacatgaa	caatgcgatt	900
aaaaaactgt	tctgtcttca	aaaagtgttg	aacaagcctg	gaggt		945

<210> 553

<211> 921

<212> DNA

<213> Unknown (H38g402 nucleotide)

<220>

<223> Synthetic construct

<400> 553

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tgcttcttct	cattcatcct	ggttctctat	ctcctgacac	tgctagggaa	tggagctatt	120
gtctgtgcag	tgaaattgga	caggcggctc	cacacaccca	tgtacatcct	tctgggaaac	180
tttgcccttc	tagagatctg	gtacatttcc	tccactgtcc	caaacatgct	agtcaatate	240
ctctctgaga	ttaaaaccat	ctccttctct	ggttgcttcc	tgcaattcta	tttctttttt	300
tcactgggta	caacagagtg	tttcttttta	tcagttatgg	cttatgatcg	gtacctggcc	360
atctgtcgtc	cattacacta	cccctccatc	atgactggga	agttctgtat	aattctggtc	420
tgtgtatgct	gggtaggcgg	atctctctgc	tatccagtc	ctattgttct	tatctcccaa	480
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ctttgtattc	cctctgggtg	tggtcgaact	aaagctttct	ccacatgtgg	gtcccaccta	720
atggtggtgt	ctctattcta	tggaaccctt	atggtgatgt	atgtgagccc	aacatcaggg	780
aaccagcag	gaatgcagaa	gatcatcact	ctggatata	cagcaatgac	tccattctta	840
aatcccccta	tctatagtct	tcgaaacaaa	gacatgaaag	atgctctaaa	gagagtccctg	900
gggttaacag	ttagccaaaa	c				921

<210> 554

<211> 768

<212> DNA

<213> Unknown (H38g403 nucleotide)

<220>

<223> Synthetic construct

<400> 554

atgtataatt	ttatcagcat	tttctcattt	ctggagatct	ggtacacaa	tgccacaatt	60
cccaagatgc	tctccatcct	catcagcagg	cagaggacca	tctccatggt	tggtctgcctc	120

ttgcagatgt	acttcttcca	ttcactggga	aattcagagg	ggattttgtt	gaccaccatg	180
gccattgata	ggtacgttgc	catctgtaac	cctctcgcct	acccaacccat	catgaccccc	240
gggctctgtg	ttcagctctc	tgtgggggtcc	tgcactctttg	gctttcttgt	gttgctccca	300
gagattgcat	ggatttccac	actgcccttc	tgtggacca	accaaatacca	ccagatcttc	360
tgtgattttg	aacctgtgct	gcgcttggcc	tgtacagaca	cgtccatgat	tctgattgag	420
gatgtgatcc	atgctgtggc	cattgtattc	tctgtcctga	ttattgccct	ttcttatatc	480
agaatcatca	ctgtaatcct	gaggattccc	tctgttgaag	gccgccagaa	ggccttttct	540
acctgtgccg	cccactcttag	tgtctttctg	atgttctatg	gcagtgtatc	cctcatgtac	600
ctgcgtttct	ctgccacttt	cccaccgatt	ttggacacag	ctgttgcact	gatgtttgca	660
gttcttgctc	cctttttcaa	ccctatcatc	tatagcttta	gaaataagga	catgaagatt	720
gcaattaaaa	agcttttctg	ccctcagaag	atgggttaatt	tatctgta		768

<210> 555

<211> 960

<212> DNA

<213> Unknown (H38g404 nucleotide)

<220>

<223> Synthetic construct

<400> 555

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ttcactctga	ctgggaatat	ggccatcatc	tgtgcagtga	ggtgggacca	tcgactccat	180
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tgtttcactc	agttccactt	cttcttttcc	ctgggcacaa	ctgaatgctt	cttccctctgt	360
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actggccagc	tctgtggcat	cttgggtgtc	ctttgttggc	tcattgggtt	ccttggacat	480
tcaattttcca	ttttcttcat	ttttcaacta	cctttctctg	gtcccaacat	cattgatcat	540
tttctgtgtg	atgtagacct	actgatggca	tgtcctctcg	cccactactca	catcataggg	600
catgtgttcc	attctgtgag	ctctcttttc	atcaacctca	ccatgggtga	catccttggg	660
tcctatacct	tgggtgctcag	aactgtgctt	taggttcctt	cttcagctgg	atggcaaaaag	720
gccatctcta	cctgtgggtc	acacttgggt	gttgtgtctc	tgttctatgg	agccataatg	780
ctgatgtatg	tgagtcaccac	acctggcaac	tcagttgcta	tgcataagct	catcacactg	840
atatattctg	tggtaacacc	tgtcttaaac	cccctcatct	acagcctacg	caacaaggac	900
atgaaatatg	ccctccatca	tgtcttctgt	ggaatgagaa	ttatccagag	atcatgaata	960

<210> 556

<211> 957

<212> DNA

<213> Unknown (H38g405 nucleotide)

<220>

<223> Synthetic construct

<400> 556

atggatccag	agaatcagac	aatggtgact	gagttttatt	tctctgattt	tcctcaatct	60
aagaatggca	gcctcttatt	cttcattcct	atgctcttta	tttatatatt	cattcttgtt	120
ggaaatttca	tgattttctt	tgtgtccaa	cgggaccccc	atctccataa	tcctatgtac	180
agttttatca	gtgtcttctc	cttcttggag	atttgggtaca	ccaccgtgac	tatccccaag	240
atgctctcca	accttctcag	tgaacagaaa	accatctctt	tcataggttg	cctcctgcag	300
atgtacttct	tccactcact	cggggtcaca	gaagccctag	tcctcacagt	gatggccatt	360
gacaggtgtg	tagccatctg	caacccccct	cgctatgcaa	tcactatgtc	cccttgactg	420
tgcateccagc	tctccactgg	ctcttgcat	tttggcttcc	tcagtgtact	gccagagatt	480
gtgtgcattt	ccactcttcc	attctgtggc	gccaacccaa	ttcatcaact	cttttgtgac	540
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gcagccca	ttgctatttt	cttgcgtttt	tttggcagtg	tgtcactcat	gtatctgcgc	780
ttctctgtca	cattccacac	attactggac	aaggccattg	cactgatgtt	tgtgtcctt	840

gccctacttt tcaaccaggt aatctatagt ctgaggaaca aagatatgaa aaacgccacc 900
aagaaaatcc tctgttctca aaagatgttc aatgcctctg ggagctaata gagttca 957

<210> 557

<211> 951

<212> DNA

<213> Unknown (H38g406 nucleotide)

<220>

<223> Synthetic construct

<400> 557

atgacacagt	tgacggccag	tgggaatcag	acaatgggtga	ctgagttcct	cttctctatg	60
ttcccgcagt	cgcacagagg	tggcctctta	ttctttatct	ccttgcttct	catctacgga	120
tttatcctaa	ctggaaaacct	aataatgttc	attgtcatcc	aggtgggcat	ggccctgcac	180
acccctttgt	atttctttat	cagtgtcctc	tccttcctgg	agatctgcta	taccacaacc	240
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tgctctctgc	agatgtactt	tttccactca	cttggatatca	cagaaaagctg	tgtcctgaca	360
gcaatggcca	ttgacaggta	catagctatc	tgcaatccac	tccgttacct	aaccatcatg	420
attcccaaac	tttgtatcca	gctgacagtt	ggatcctgct	tttgtggctt	cctccttggtg	480
cttcctgaga	ttgcatggat	ttccaccttg	cctttctgtg	gctccaacca	gatccaccag	540
atattctgtg	atttcacacc	tgtgctgagc	ttggcctgca	cagatacatt	cctagtgggc	600
attgtggatg	ccatccatgc	agcggaaatt	gtagcctcct	tcctgggtcat	tgtcttatcc	660
tacatccgga	ttattatagt	gattctggga	atgcactcag	ctgaagggtca	tcacaaggcc	720
ttttccacct	gtgctgctca	ccttgctgtg	ttcttgctat	tttttggcag	tgtggctgtc	780
atgtatttga	gattctcagc	cacctactca	gtgttttggg	acacagcaat	tgtgtgctact	840
tttgttatcc	ttgtccctt	tttcaacccc	atcatctata	gcctgaaaaa	caaggacatg	900
aaagaggcta	ttggaaggct	tttccactat	cagaagaggg	ctgggttgggc	t	951

<210> 558

<211> 831

<212> DNA

<213> Unknown (H38g407 nucleotide)

<220>

<223> Synthetic construct

<400> 558

atggctctaa	ttggaaacct	atccatgatt	cttctcatct	tcttggacac	ccatctccac	60
acacccatgt	atttcctact	tagtcagctc	tccttcattg	acctaaatta	catctccacc	120
attgttccta	agatggcatc	tgattttctg	tctggtaaca	agtctatctc	cttcactggg	180
tgtgggattc	agagtttctt	cttctcggca	ttaggagggtg	cagaagcact	acttttggca	240
tctatggcct	atgatcgta	cattgctatt	tgttttctc	ttcactatcc	catccgcagt	300
agcaaaagaa	tgtgtgtgct	gatgataaca	gggtcttggg	tcataggctc	gatcaatgct	360
tgtgtctaca	ctgtatatgt	actccatatt	ccttattggc	aatccagggc	catcaatcat	420
ttcttctgtg	atgtcccagc	aatggtgact	ctggcctgca	tggacacctg	ggtctatgag	480
ggcacagtgt	ttttgagcac	caccatcttt	ctcgtgtttc	ccttcattgc	tatttcatgt	540
tcctatggcc	gggttctcct	tgtgtgtctac	cacatgaaat	ctgcagaagg	gaggaagaaa	600
gcctacctga	cctgcagcac	ccacctcact	gtagtaactt	tctactatgc	accttttgtc	660
tacacttatc	tacgtccaag	atccctgcga	tctccaacag	aggacaaggt	tctggctgtc	720
ttctacacca	tcctcacccc	aatgtcaaac	cccatcatct	atagcctgag	gaacaaggag	780
gtgatggggg	ccctgacacg	agtgagtcag	agaatctgct	ctgtgaaaat	g	831

<210> 559

<211> 725

<212> DNA

<213> Unknown (H38g408 nucleotide)

<220>

<223> Synthetic construct

<400> 559

atggatagag	taaataattc	tgcggtatct	aaatttgtat	tgattggact	ttcaagctct	60
tgggagatgc	atctttttct	tttttggttc	ttctctgtgt	tctacatggg	aattatcctg	120
gaaaatctct	tcatttgtgt	cacagtaatt	attgactctc	atttaaattc	cccagggtact	180
gcctactggc	caacatttat	cttcttgatc	tgggtcttct	cctacagttc	tgactttttc	240
actaactgca	gcatcatttc	ttttccaaga	tgcatgatac	agatattttt	catttgtgtc	300
atgcgtaaaa	attgagatgg	tgctgctcat	aaccatggca	tagagcaggt	acactgccaa	360
tctgtaagcc	tccccattac	ctgaccacaa	tgaaccccaa	aatgtgtgtt	tcctttgttg	420
gaggcatcct	ggatagtcag	gataatccat	gctgtatctc	agtttgtttt	tgccataaac	480
ttgccttttt	gtggccctaa	tagagtaggt	agttttcact	gtgattttcc	ttatgtcatg	540
aaacttgctt	gtgtagatac	ttacaaacta	gaggttgtag	tcactgctaa	cagtgggctt	600
atatccatag	ctacctgttt	cttattaata	atatcctata	ttttcatttc	ggtaaccgtc	660
tagaatcctt	cttcaggaga	cttatctaaa	gcatttgtgt	catgttagat	cacatcacag	720
taggg						725

<210> 560

<211> 936

<212> DNA

<213> Unknown (H38g409 nucleotide)

<220>

<223> Synthetic construct

<400> 560

atggacacag	ggaactggag	ccaggtagca	gaattcatca	tcttgggctt	cccccatctc	60
cagggtgtcc	agatttatct	cttctcttg	ttgcttctca	tttacctcat	gactgtgttg	120
ggaaacctgc	tgatattcct	ggtgggtctg	ctggactccc	ggcttcacac	acccatgtac	180
cactttgtca	gcattctctc	cttctcagag	cttggctata	cagctgccac	catccctaag	240
atgctggcaa	acttgttcag	tgagaaaaag	accatttcat	tctctgggtg	tctcctgcag	300
atctatttct	ttcactccct	tggagcgact	gagtgtatc	tcctgacagc	tatggcctac	360
gataggattt	tagccatctg	ccggccccct	cactacccaa	ccctcatgac	cccaacactt	420
tgtgcagaga	ttgccattgg	ctgttggttg	ggaggcttgg	ctgggccagt	agttgaaatt	480
tccttgattt	cacgcctccc	attctgtggc	cccaatcgca	ttcagcacgt	cttttgtgac	540
ttccctcctg	tgctgagttt	ggcttgcact	gatacgtcta	caaatgtcct	agtagatttt	600
gttataaatt	cctgcaagat	cctagccacc	ttcctgtcta	tcctctgtc	ctatgtgcag	660
atcatctgca	cagtgtcag	aattccctca	gctgcgggca	agaggaaggc	catctccacg	720
tgtgcctccc	acctcactgt	ggttctcact	ttctatggga	gcatecttct	catgtatgtg	780
cggctgaaga	agagctactc	actggactat	gaccaggccc	tggcagtggt	ctactcagtg	840
ctcacaccct	tcctcaaccc	cttcatctac	agcttgacaa	acaaggagat	caaggaggct	900
gtgaggaggc	agctaaagag	aattggggata	ttggca			936

<210> 561

<211> 635

<212> DNA

<213> Unknown (H38g410 nucleotide)

<220>

<223> Synthetic construct

<400> 561

gaattccttt	tttataatta	caatcaaaca	tcaactgatt	tcattcttatt	ggggctgttc	60
ccacaatcaa	gaattggcct	tttcgtatct	accctcattt	ttctcatttt	cctaattggct	120
ctaattggaa	atctatccat	gattcttctc	atcttttttg	acatccatct	ccacacacct	180
atgtatttcc	tacttagtca	gctctccctc	attgacctaa	attacatctc	caccattgtt	240
ccaaagatgg	tttatgattt	tctgtatgga	aacaagtcta	tctccttcac	tggatgtggg	300
attcagagtt	tcttcttctt	gacttttagca	gttgacagaag	ggctgtcctc	gacatcaatg	360
gcctatgac	gttatgtggc	catttgcttt	cctctccact	atcccatccg	tataagcaaa	420
agagtgtgtg	tgatgatgat	aacaggatct	tggatgataa	gctctatcaa	ctcttgtgct	480
cacacagtat	atgcactctg	tatcccatat	tgcaagtcca	gagccatcaa	tcattttttc	540
tgtgagggat	cctctgagag	gtacctggga	gcatgcaagc	ttggcgctgg	gccgcgggtg	600
aaacggcgtg	actggtaaaa	ccctgggcgg	gcca			635

<210> 562
 <211> 789
 <212> DNA
 <213> Unknown (H38g411 nucleotide)

<220>
 <223> Synthetic construct

<400> 562
 atgttgggga attactctag cgccactgaa ttttttctct taggcttccc tggctcccaa 60
 gaagtatgcc gtatcctatt tgcgaccttc ttcctcttgt atgcagtgc agtgatggga 120
 aacgtgggtca tcatcatcac tgtctgtgtt gataaatgtc tgcagtcgcc cttttatatt 180
 ttcctggggcc acctctgtgt cctggagatc ctgatcacat ccaccgctgt cccttttatg 240
 ctctgggggt tgcctgttcc aagcaccag atcatgtctt tgacagcctg tgcctgcacag 300
 ctatatttat acctttcttt ggggtacctg gagttggcat taatgggagt gatggctgtg 360
 gaccgttatg tggctgtgtg taaccctttg aggtacaaca tcattatgaa cagcagcacc 420
 ttcatttggg tgataattgt gtcattgggtt ttgggggttt tttctgaaat ctggccagtt 480
 tatgccactt ttcagcttac tttctgcaaa tcaagtgtgt tagatcattt ttattgtgac 540
 cgaggacaat tgctcaaggc atcctgtgag gacactcttt tcagagagtt tttctttttt 600
 ctaatggctg ttttcattat cattgggtct ttgatcccta cgattgtctc ctacacctac 660
 atcatctcca ccaacctcaa gattccgtca gcctctggct ggaggaaatc cttttccacc 720
 tgtgcctccc acttcaccta tgtgtgatt ggctatggca gctgcttgtt tctctacgtg 780
 aaaccaag 789

<210> 563
 <211> 951
 <212> DNA
 <213> Unknown (H38g412 nucleotide)

<220>
 <223> Synthetic construct

<400> 563
 atggatcaat acaaccattc aagcctggct gaatttgtgt tccttggctt tgccagtgtg 60
 ggctatgtca ggggctggct ttttgtcctg ctgctattgg catacctgtt caccatctgt 120
 ggtaacatgc tcatcttctc agtcatccga ctggatgcag ctctgcacac acctatgtac 180
 cactttgtca gtgttctttc cttcttggag ttgtggtata cagctaccac tatccctaag 240
 atgttgtcta atattctcag tgagaagaaa accatttctt ttgcaggatg cctccttcag 300
 acctacttct tccactcctt gggagcgtct gaatgctacc ttcttacagc catggcctat 360
 gatagatacc tggccatttg tcggcccctc cactacccta taattatgac caccacactc 420
 tgtgccaaga tggctgtctg ttgttggact tgtggcttcc tgtgtcccat ttctgaggtc 480
 atccttgcct cccagctccc attttgtgt tacaatgaaa tccaacacat tttctgtgac 540
 tttccacctt tgcctgagctt ggctgcaag gacacatctg ctaacattct ggtggacttt 600
 gccattaatg ctttcataat tcttatcact ttcttcttta tcatgatttc ttatgcaagg 660
 atcattgggg ctgtgtgtaa gataaaaaca gcatcaggaa gaaagaaggc cttttctacc 720
 tgtgcctcac atcttgcctg ggtcctcctc ttcttgggga gcatcatctt catgtatgtg 780
 cggctaaaga agagctatc cctgaccctt gaccgaacac ttgctatagt ttactccgta 840
 ctaacaccaa tggctaatcc aattatctac agtcttcgta acaaggaaat cattaaagct 900
 atcaagagga catcttcca gaaggagat aaagctagtc ttgctcatct t 951

<210> 564
 <211> 945
 <212> DNA
 <213> Unknown (H38g413 nucleotide)

<220>
 <223> Synthetic construct

<400> 564
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ccccacctcc	agctgatgct	cttcctgctg	ttcctgctga	tgtacctgtt	cacgctgctg	120
ggcaacctgc	tcatcatggc	cactgtctgg	agcgagcgca	gcctccacat	gcccattgtac	180
ctcttctctg	gtgccctctc	catcaccgag	atcctctaca	ccgtggccat	catcccgcgc	240
atgctggcgc	acctgctgtc	caccacgcgc	tccatcgccct	tcctggcctg	tgccagtcag	300
atgttcttct	ccttcagctt	cggttccacc	cactccttcc	tgctcactgt	catgggctac	360
gaccgctacg	tggccatctg	ccacccccctg	cgttacaacg	tgctcatgag	cctgcggggc	420
tgcacctgcc	gggtgggctg	ctcctgggct	gggtggcttg	tcattgggat	gggtggtgacc	480
tcggccattt	tccacctcgc	cttctgtgga	cacaaggaga	tccaccattt	cttctgccac	540
gtgccacctc	tgttgaagtt	ggcctgtgga	gatgatgtgc	tggtggtggc	caaaggcgtg	600
ggcttggtgt	gtatcacggc	cctgctgggc	tgttttctcc	tcctcctcct	ctcctatgcc	660
ttcatcgctg	ccgccatctt	gaagatccct	tctgctgaag	gtcggaaaca	ggccttctcc	720
acctgtgcct	ctcacctcac	tgtggtgggc	gtgcactatg	gctttgcctc	cgtcatttac	780
ctgaagccca	aagggtcccca	gtctccggaa	ggagacacct	tgatgggcat	cacctacacg	840
gtcctcacac	ccttctctcag	ccccatcctc	ttcagcctca	ggaacaagga	gctgaaggtc	900
gccatgaaga	agacttgctt	caccaaactc	tttccacaga	actgc		945

<210> 565

<211> 958

<212> DNA

<213> Unknown (H38g414 nucleotide)

<220>

<223> Synthetic construct

<400> 565

cacacagagc	cacggcatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcctgt	cctcgctggg	ctgtcccat	ccatgtatct	ggtcacagt	120
ctgaggaacc	tgctcgatct	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaaccc	gtgctgggct	gacatcggtt	tcacttcggc	cacggttccc	240
aagatgactg	tggacatgca	gtcacatata	agagtcattc	cttatgagag	ctgcctgaca	300
cggatgtctt	tcttggtcct	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatggcc	360
taggactgct	ttgtagccat	ctgtcgccct	ctgcactacg	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttagtttt	gggtgccttt	ttccttagcc	tggtggattc	ccagctgcac	480
agttagattg	ttacaattca	ccttcttcaa	gaatgtggaa	atctctcatt	ttgtctgtga	540
gccatctcaa	cttctcaacc	ttgcctgttc	tgacagcgtc	atcaatagca	tattcatgta	600
tttcaatagt	actatgtttg	gttttcttcc	catttcaggg	atccttttgt	cttactataa	660
aattgttccc	tccattctaa	ggatttcata	gtcagatggg	aagtataaag	ccttctccac	720
ctgtggctct	cacctggcag	ttgtttgctt	attttatgga	acaggcattg	gcattgtacct	780
gacttcagct	gtggcaccac	cccccaggaa	tggtgtgggtg	gcgtcagtga	tgtacgctgt	840
ggtcaccccc	atgctgaacc	ctttcatcta	cagcctgaga	aacagggaca	ttcaaagcgc	900
cctgtggagg	ctgcgcagca	gaacagtcga	atctcatgat	ctgttccatc	ctttttct	958

<210> 566

<211> 470

<212> DNA

<213> Unknown (H38g415 nucleotide)

<220>

<223> Synthetic construct

<400> 566

gtctcccccac	tgtgggaatg	tgtgtcatga	cagcgggtctc	cccacttctt	atgctctgga	60
gactcagttt	tctgtctggt	tcacagtgtg	ggctgctgca	cactacttct	ttcacagagt	120
ttgcggcttc	tttcagtttt	cctgtttaagt	tcctgtgctg	cttcttggaa	aaaagtccac	180
agcatgaatc	tctacacacc	attttgtctt	tctaagtggg	agaatcacgt	taacaatgcc	240
ttcaacctgc	catcatggaa	aaaaagtaaa	agtgtgggtca	ccatgttcta	agggcccgcc	300
atgatcacgt	acttgaggtc	tgactcctag	tataacctac	agtgggaaaa	cagttggtgc	360
tgttctacag	catgtctctc	gccttcataa	aacctcat	ctccagcctc	aggaacaagg	420
atgtaaaagg	ggcttcttgg	aaagtactta	gagtcaaagg	gacagctcaa		470

<210> 567

<211> 862
 <212> DNA
 <213> Unknown (H38g416 nucleotide)

<220>
 <223> Synthetic construct

<400> 567
 atggaaaatt acaatcaaac atcaactgat ttcattcttat tggggctgtt tccaccatca 60
 agaattgacc ttttcttctt cattctcttt gttctcattt tcctgatggc tctaattgga 120
 aacctatcca tgattcttct catcttcttg gacacccatc tccacacacc catgtatttc 180
 ctgcttagtc agctctccct cattgacctt aattacatct ctacgattgt tcctaagatg 240
 gcttctgatt ttctgtatgg aaacaagtct atctccttca ttgggtgtgg gattcagagt 300
 ttcttcttca tgacttttgc aggtgcagaa gcgctgctcc tgacatcaat ggcctatgat 360
 cgttatgtgg ccatttgctt tcctctccac tatcccatcc gtatgagcaa aagaatgtat 420
 gtgctgatga taacaggatc ttggatgata ggctccatca actcctgtgc tcacacagta 480
 tatgcattcc gtatcccata ttgcaagtcc agagccatca atcatttttt ctgtgatgtt 540
 ccagctatgt tgacattagc ctgtacagac acctgggtct atgagtacac agtggttttg 600
 agcagcacca tctttcttgt gtttcccttc actggcattg cgtgttccta tggctgggtt 660
 ctcttctgtg tctaccgcat gcactctgca gaaggaggaa aaaggcctat tcgacctgca 720
 gcacccacct cactgtagta actttctact atgcaccctt acgttatacc tatctatgtc 780
 caagatccct gtttatttct gacagaggac aaggttgggg gggggggggg acaccatcct 840
 cacctcaatg ctcaacccca tc 862

<210> 568
 <211> 930
 <212> DNA
 <213> Unknown (H38g417 nucleotide)

<220>
 <223> Synthetic construct

<400> 568
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 cctcagatgg agatcatctt ctctgtgggc ttctcatag tttacctggg taatgtagtg 120
 gggaatatgg gtatgattat cctgattaca acagacactc agcttcacac acctatgtat 180
 ttttctctct gcaacctctc ctctgttgac ctgggtact cctcagccat tgccccagg 240
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 ttgtgttttt ttgtaggttt tgtggatgct gagtgctatg tcctggcagc catggcctat 360
 ggtcgttttg tggccatttg tcgacccctc cactatagca ccttcatgct caagcaggctc 420
 tgcttggtct tcatgctggg ctcttacctg gctgggtctag tgagtttagt agccacact 480
 acctcacct tcagcctgag ttactgtggt tccaatatca tcaatcattt cttctgcgaa 540
 atcccaccac tcttggccct ctctgtctca gacacctaca tcagttagat cttgtctctc 600
 agtctgtgtg gcttcattga attcagcacc atctcatca tcttcatctc ctataccttt 660
 atccttggtg caatcatcag aatgcgttca gctgaaggcc gccttaaggc tttctccacc 720
 tgcgggtctc accttactgg catcaccctc ttctatggca cagtcatgtt tatgtacctg 780
 aggccaacat ccagctactc cctggaccaaa gacaagtggg cctctgtgtt ctacacgggt 840
 atcatcccca tgttaaatac cttgatctac agtttgcgga acaaggatgt gaaagctgct 900
 ttcaaaaagc taattggaaa aaaatctcaa 930

<210> 569
 <211> 1005
 <212> DNA
 <213> Unknown (H38g418 nucleotide)

<220>
 <223> Synthetic construct

<400> 569
 tctacagacc cacagaatct aatagatgtc tctatatctc tcctcctaga acctcagagg 60
 atccagaacg gcagctgggc cttgctgggc tgttctgtc catgtgcctg gtcacgggtg 120

tggggaacct	gctcatcatc	ctggccggtca	gtcctgactc	ccacctccac	acccccatgt	180
acttcttcct	ctccaaacct	tcttgcctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccga	tctcacagca	gagtcattct	ctatgcaggc	tgcctgactc	300
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gcctatgacc	agtttgtagc	catctgtcac	cctctatata	attcagccgt	catgaaccct	420
tgtttctgtg	gctttctagt	tttgttgact	tttttttttc	tcagtctttt	agacgcccag	480
ctgcacaact	tgattgcctt	acaaatgacc	tgcttcaagg	atgtggaaat	tcctaatttc	540
ttctgtgacc	cttctccact	cccccatctt	gcatgttggt	acaccttcac	caataacata	600
atcatgtatt	tcctgtctgc	catatttggg	tttcttccca	tctcggggac	ccttttctct	660
tactataaaa	ttgtttcttc	cattctgagg	gtttcatcat	cagggtggga	gtataaggcc	720
ttctccacct	gtgggtctca	cctgtcgggt	gtttgtgat	tttatggaa	aggcattgga	780
gggtacctca	gttcagatgt	gtcatcttcc	ccgagaaagg	ctgcgggtgg	ctcagtgatg	840
tacacgggtg	tcacccccat	gctgaacccc	ttcatctaca	gcctgagaaa	cagggatatt	900
aaaagtgtcc	tgcgggtggc	gcacggcagc	tctgtctaat	ctcaacatct	tcttatctgt	960
tgcattcctt	ttgtagtgtg	ggtaaaaaa	ggcagcaggg	tcaaa		1005

<210> 570

<211> 907

<212> DNA

<213> Unknown (H38g419 nucleotide)

<220>

<223> Synthetic construct

<400> 570

atggatcacg	tcagtcataa	ctggactcag	agttttatcc	ttgctgggtt	caccaccact	60
gggaccctac	aacctcttgc	cttcttgggg	accctatgca	tctatctcct	cacacttgca	120
gggaacattc	tcattcattgt	cctgggtacag	ttagattctg	gactgttcac	gcccattgtac	180
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ctgctgcaca	cettgctcca	agggtgttca	cccgtctcat	cagctgtatg	ctttattcag	300
ctatgtcttt	cattccttag	ggatgactga	gtgctacctg	ctgggtgtca	tggcactgga	360
tagctacctt	atcatctgcc	accactcca	ctaccacgca	ctcatgagca	gacagggtaca	420
gttacgacta	gctggggcca	gttgggtggc	tggcttctca	gctgcacttg	tgccagccac	480
cctcactgcc	actctgccct	tctgcttgaa	agagggtggc	cattactttt	gtgacttggc	540
accactaatg	cggttggcat	gtgtggacac	aagctggcat	gctagggcc	atggcacagt	600
gaattggtgtg	gccactgggt	gcaactttgt	gctcattttg	ggactctatg	gaggatcct	660
gaatgctgtg	ctgaagctac	cctcagctgc	cagtagtgcc	aaggccttct	ctacctgttc	720
ctccacgta	actgtggtgg	cactattcta	tgtctctgcc	ttcacagtat	atgtgggctc	780
acctgggagt	cgacctgaga	gcacagacaa	gcttggtgcc	ttgggttatg	cccttattac	840
ccctttctct	aatcctatca	tctatagcct	tcgcaacaag	gagggtgaaga	aggctttaag	900
gagagtc						907

<210> 571

<211> 1006

<212> DNA

<213> Unknown (H38g420 nucleotide)

<220>

<223> Synthetic construct

<400> 571

ccaacgaaga	gagagaacca	cacagtgata	aggaggtttg	ttttccaggg	tttctccagc	60
tttcatgaac	acaagcttac	cctctttgtg	gtatttctta	ccttgtgtct	tttaaccctg	120
gctggcaatg	tcataattgt	gacaattatc	agcattgatc	gtcaccttca	cacccccatg	180
tacttctttg	ttagtatgct	ttccacttca	gagactgtct	acacattagt	cattgtacca	240
cggatgctct	ccagtctctt	aagtctaagc	caacctatct	ctttgggtgg	ctgtgccacc	300
cagatgtttt	ttttattacc	ttggccatca	acaactgctt	tctgctcaca	gcaatggggt	360
atgatcgcta	tgtggccatc	tgtaaccctt	tgagggtacat	gatcatcatg	aacaagaaag	420
tgtgtgtcca	gctgggtatg	gggtcctgca	gtgttgggct	gcttgtggcc	atagtccaga	480
tttcatctgt	gttcaggctg	cctttttgtg	ataaacaggt	ggcccattat	ttctgtgata	540
tccacccagt	tatgaaactt	tcctgtgttg	ataccactct	acatgacctt	attaattttg	600

ttgttagttc	cctgggttatt	gtgggtgccgc	tggggttgggt	cttcattctcc	tacatcctca	660
tcattctctac	catcctcaag	gtcacctctc	ctgaggggccg	gaaaaaggct	tttgcaactt	720
gtgccctccca	cctcactgtg	gttatcatcc	actatggctg	tgccctccatt	gcctacctca	780
agcccaagtc	agagaacacc	agggatcagg	accagctaat	ttcagtgaca	tacaccgtct	840
ttactccact	acttaatcct	gttgtgtaca	ctttgaggaa	caaggaggtc	aagaatgcc	900
ttcaccgtgc	tattggcaaa	aaaccttttg	cctagaatct	tcattcagttt	gacatatagt	960
cagtcatagt	ctgggtatatt	ttttaagctc	gagaaaattg	aatcct		1006

<210> 572

<211> 945

<212> DNA

<213> Unknown (H38g421 nucleotide)

<220>

<223> Synthetic construct

<400> 572

atgtccataa	ccaaagcctg	gaacagctca	tcagtgaacca	tgttcattcct	cctgggattc	60
acagaccatc	cagaactcca	ggccctcctc	tttgtgacct	tcctgggcat	ctatcttacc	120
accctggcct	ggaacctggc	cctcattttt	ctgatcagag	gtgacaccca	tctgcacaca	180
cccatgtact	tcttcctaag	caacttatct	ttcattgaca	tctgctactc	ttctgctgtg	240
gctcccaata	tgctcactga	cttcttctgg	gagcagaaga	ccatatcatt	tgtgggctgt	300
gctgctcagt	tttttttctt	tgctggcatg	ggtctgtctg	agtgcctcct	cctgactgct	360
atggcatacg	accgatatgc	agccatctcc	agcccccttc	tctacccac	tatcatgacc	420
cagggcctct	gtacacgcat	ggtgggtggg	gcatatgttg	gtggcttctc	gagctccctg	480
atccaggcca	gtcccatatt	taggcttcac	ttttgctggc	ccaacatcat	caaccacttc	540
ttctgcgacc	tcaccaccgt	cctggctctg	tcttgcctctg	acaccttctc	cagtcaagtg	600
gtgaatttcc	tcgtgggtgt	cactgtcgga	ggaacatcgt	tcctccaact	ccttatctcc	660
tatggttaca	tagtgtctgc	ggtcctgaag	atcccttcag	cagagggccg	atggaaagcc	720
tgcaacacgt	gtgcctcgca	tctgatgggt	gtgactctgc	tgtttgggac	agcccttttc	780
gtgtacttgc	gaccagctc	cagctacttg	ctaggcaggg	acaagggtgt	gtctgttttc	840
tattcattgg	tgatcccat	gctgaaccct	ctcatttaca	gtttgaggaa	caaagagatc	900
aaggatgccc	tgtggaaggt	gttggaaggt	aagaaagtgt	tttct		945

<210> 573

<211> 949

<212> DNA

<213> Unknown (H38g422 nucleotide)

<220>

<223> Synthetic construct

<400> 573

atgccttgaa	agatggagtc	aataaacaca	aacttcactg	tcactgaatt	tgtgttctctg	60
gggttgtcct	ctgaaccaa	gatacagctt	attcttttta	ttatgttctt	gttctattta	120
tcaacgggtg	ctggaaatgt	tataatcatc	actattatct	agatggaacc	tctcctccaa	180
accccatgt	acttcttctc	cactaattta	tcctttctgg	acatttgcta	cacatccacc	240
aatgtccccc	aaatgctgtc	caacatggcg	gggaaaaaga	acaccatctc	attctccagc	300
tgcgctactc	agatgtactt	ctccctctcc	tttggaaatga	ttgtgtcctc	cttgggtgtca	360
tggcttatga	cagatatgta	gccatttgct	atcctcttca	ttataccttc	attatggacc	420
aaaacacctg	cattcaactg	gcagttatatt	cttgggtccag	tagcttctctg	agttccatgg	480
ttatcaatgt	tctcacgttg	agtttgcctt	actgtgggcc	taatatacctg	aatcactttt	540
tctgtgaggt	actttctgtc	ctgaggttgg	cttgaccaa	cacctcattc	acagagctgg	600
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tatccacctg	tacctcccat	ttgacagtgg	taaccttatt	tatgggactg	ccatcttcat	780
ggacatgaga	ccacagtcga	ggtcctcctg	ggctggcggc	aagatcattg	cggttttcta	840
cacggtgggtc	acacccatgc	ttaacccctt	gatttacagc	ctgaggaacc	aagatgtgaa	900
aggagctcga	aggagagcta	ttgcaaagca	gaggatgtga	cagctgtta		949

<210> 574

<211> 1022

<212> DNA

<213> Unknown (H38g423 nucleotide)

<220>

<223> Synthetic construct

<400> 574

atgccaaagc	taaattccac	ttttgtgact	gagttcctct	ttgaagggtt	ctccagcttc	60
aggcggcagc	acaaacttgt	cttcctttgt	gtcttcctaa	ctttgtacct	gctgactctc	120
tctggcaatg	tgattatcat	gaccattatt	cgccctggacc	atcatcttca	cacccccatg	180
tactttcttc	tgtgcatgct	atccatctct	gagacctgct	acactgtggc	catcattccc	240
catatgcttt	ctgggtctct	gaatcctcat	cagcccattg	ccacccaaag	ctgtgccact	300
cagctcttct	tctatctcac	ctttggcatc	aacaactgct	tcctgctcac	agtcattggga	360
tatgaccgct	atgtggccat	ctgcaacccc	ctaagggtatt	cagtcatcat	gggtaagagg	420
gcctgtatcc	aactggcctc	tggatcactg	gggattggcc	ttggcatggc	cattgtccaa	480
gtaacatctg	tgtttggcct	gccattctgt	gatgcctttg	tcactctcca	cttcttctgt	540
gatgtgagac	acctgctgaa	gctggcctgc	acagacacca	ctgtcaatga	gataatcaac	600
tttgttgtca	gcgtctgtgt	ccttgttcta	cctatgggcc	tggcttttat	ctcctatgtc	660
ctcatcatct	ccaccattct	taagattgcc	tcagctgaag	gtcagaagaa	ggcctttgcc	720
acctgcgcct	cccacctcac	agtggctatc	atccactatg	gctgtgcctc	catcatctac	780
ctgaagccta	agtcccagag	ttccctggga	caggacagac	tcactctcagt	gacctacact	840
catcactccc	ctactgaacc	ctgtttgtga	cagcctgaag	aacaaggagg	tcaaagatgc	900
tctgcacaga	gccgtggggc	aaaaaactct	gtctccttaa	tgaagagagg	ttgtgaaggc	960
ttttcctttg	cgtttataaa	tatgtactaa	tttttaatgc	tctttcaata	atgcccttat	1020
gt						1022

<210> 575

<211> 938

<212> DNA

<213> Unknown (H38g424 nucleotide)

<220>

<223> Synthetic construct

<400> 575

atggatattg	gcctgagtat	agccaatagc	tcagggtttc	aactgtctga	gttcattctg	60
atagggttcc	caggcattca	tgagtggcag	cactggctct	ccctgccctt	agctcttggt	120
gccaatctcc	tcatacataat	caccattcaa	catgagacca	tgctacatga	acccatgtac	180
catttgctgg	gcatattagc	agtgggtggc	attggcctgg	ccaccaccat	catgcccaag	240
atcctggcca	tcttctggtt	tgatgccaa	gccatcagcc	tccttgagtg	ttttgctcag	300
atctatgcca	tccactcttt	catgtgcatg	gagtcaggca	tcttcctctg	catggcagtg	360
gatagatata	tggccatttg	ttatccccct	cagtacactt	ccatagttac	tgaagctttt	420
gtcatcaaag	ccacactgtc	agtagtgctc	aggaatggcc	tgttgaccat	cccagtggca	480
gtattggctg	cccagcgaca	ctactgctcc	aggaatgaga	ttgatcagtg	cctctgctct	540
aacttggggg	tcacaagtct	ggcctgtgat	gacaccacta	ttaacagggt	ttaccagctg	600
gccttgggtc	gggttgtggt	tgggagtgc	atgggtctgg	tctttgcttc	ctattctttg	660
attattcact	cagtgtgtaa	gctgaactct	gctaaagcaa	catctaaggc	cctgaatacc	720
tgcagctccc	accttatcct	cattctcttt	ttctacacag	ctattattgt	agtatctgtc	780
accacctggc	aggaagaagg	gctccccgca	tcctgtttct	cctcaatgtg	ctgcatattg	840
tcatccccct	agcccttaac	cccatagtat	atgcccttag	gacctaggag	ctgagagcgg	900
gcttcacaga	gctgcttggt	ttgggcgagt	atgtgtcc			938

<210> 576

<211> 945

<212> DNA

<213> Unknown (H38g425 nucleotide)

<220>

<223> Synthetic construct

<400> 576

atgtttctccc	caaaccacac	catagtgaca	gaattcattc	tcttgggact	gacagacgac	60
ccagtgtctag	agaagatcct	gtttggggta	ttccttgcca	tctacctaat	cacactggca	120
ggcaacctgt	gcatgatcct	gctgatcagg	accaattccc	acctgcaaac	acccatgtat	180
ttcttccttg	gccacctctc	ctttgtagac	atttgctatt	cttccaatgt	tactccaaat	240
atgctgcaca	atttcctctc	agaacagaag	accatctcct	acgctggatg	cttcacacag	300
tgtcttctct	tcacgcacct	ggtgatcact	gagttttaca	tccttgcttc	aatggcattg	360
gatcgctatg	tagccatttg	cagccctttg	cattacagtt	ccaggatgtc	caagaacatc	420
tgtgtctgtc	tggtcactat	cccttacatg	tatgggtttc	ttagtgggtt	ctctcagtca	480
ctgctaacct	ttcacttata	cttctgtggc	tcccttgaaa	tcaatcattt	ctactgcgct	540
gatactctct	ttatcatgct	ggcctgctct	gacacccgtg	tcaaaaagat	ggcaatgttt	600
gtagttgcag	gctttaatct	ctcaagctct	ctcttcatca	ttcttctgtc	ctatcttttc	660
atTTTTgcag	cgatcttcag	gatccgttct	gctgaaggca	ggcacaaaagc	cttttctacg	720
tgtgcttccc	acctgacaat	agtcactttg	ttttatggaa	ccctcttctg	catgtacgta	780
aggcctccat	cagagaagtc	tgtagaggag	tccaaaataa	ctgcagtctt	ttatactttt	840
ttgagcccaa	tgctgaacct	attgatctat	agcctacgga	acacagatgt	aatccttgcc	900
atgcaacaaa	tgattagggg	aaaatccttt	cataaaattg	cagtt		945

<210> 577

<211> 771

<212> DNA

<213> Unknown (H38g426 nucleotide)

<220>

<223> Synthetic construct

<400> 577

atgtttctac	tgttggccat	cctggcagcc	acagacctgg	gcttagccac	atctatagcc	60
ccagggttgc	tggctgtgct	gtggcttggg	ccccgatctg	tgccatatgc	tgtgtgcctg	120
gtccagatgt	tctttgtaca	tgcactgact	gccatggaat	caggtgtgct	tttggccatg	180
gcctgtgata	gtgctgcggc	aatagggcgt	ccactgcact	accctgtcct	ggtcacaaaa	240
gcctgtgtgg	gttatgcagc	cttggccctg	gcactgaaag	ctgtggctat	tgttgtacct	300
ttcccactgc	tgggtggcaa	gtttgagcac	ttccaagcca	agaccatagg	ccatacctat	360
tgtgcacaca	tggcagtggt	agaactgggt	gtgggtaaca	cacaggccac	caacttatat	420
ggtctggcac	tttactggc	catctcaggt	atggatattc	tgggtatcac	tggctcctat	480
ggactcattg	cccattgctg	gctgcagcta	cctaccgggg	aggcccatgc	caaggccttt	540
ggtacatgta	gttctcacat	ctgtgtcatt	ctggccttct	acatacctgg	tctcttctcc	600
tacctgcac	accgctttgg	tcatacacat	gtcccaaagc	ctgtgcacat	ccttctctcc	660
aacatctact	tgtgtgtgcc	acctgccctc	aacccccca	tctatggggc	ccgcaccaag	720
cagatcagag	accgactcct	ggaaaccttc	acattcagaa	aaagcccgtt	g	771

<210> 578

<211> 1074

<212> DNA

<213> Unknown (H38g427 nucleotide)

<220>

<223> Synthetic construct

<400> 578

gtgagcatga	gcttcttaat	aagaagtgat	tcaacactac	acactccaat	gtgcttgttc	60
ctcagtcata	tctcctttgt	agatctctat	tatgccacca	atgccactcc	tccgatgtcg	120
gttaactttt	tttttccaag	agaaaaaccg	tttcccttat	tgggtgtctt	atccaatttc	180
accttttcat	tgcactgggt	atcacagatt	atcatatgct	cacagtgatg	gtgtatgacc	240
actacatggc	catctgcaag	cctttgttat	atggaagcaa	aatgtccagg	tgtgtctgcc	300
tctgtctcac	tgtgtctccc	tatatattat	gctctgcaaa	tggctctggt	caggtcatcc	360
tgatgctttg	tctgttcttc	tgtgaaccca	atgagatcaa	ccactttttt	ttttttggag	420
aaaatgcatt	atatgcacat	ttaattccac	tataaatttt	tgaatggacg	gttggagagg	480
aagggagaaa	tacatatata	cggagagaa	accacccga	aagtatatata	aatgggagaa	540
aggaacctgt	tgatccaagt	ttccatatcc	ttattatggc	atataagggtc	atgattattt	600
tctcagtatg	aagcatctcc	cagggctgac	tctgatgtaa	aattggagat	caaccacttt	660

tattatgcag	aaccacccct	cttagtcctc	gcctgcttgg	atacttatgt	caaagaaact	720
gccatgttca	tggtggctgg	ttccaacctc	atctgccctc	tcactatcat	ctttattttc	780
tacactttca	tcttcacaga	cattctgcat	atctgcactg	ctgagggaag	gtacaatgcc	840
ttctccacct	gcggtccct	tgtgactgcc	gtcactgtct	ttcaaggaaac	gctgtttcac	900
atgtgcctga	ggcccccttc	tgaggcatct	gtagaacagg	ggaaaattgt	agctgctttt	960
tatatctttg	tgagtcctac	gttaaaccct	ttgatctacc	gtctgaggaa	taaaaatggt	1020
aaaagaacaa	taagggaagt	tatccaaaag	aaactgtttg	ctaagtaagg	taga	1074

<210> 579

<211> 937

<212> DNA

<213> Unknown (H38g428 nucleotide)

<220>

<223> Synthetic construct

<400> 579

atgtttggtg	ctaattctcac	cacettccat	cccactctat	tcattctcct	tggtcatcca	60
ggactggagc	aataccacat	ctggctttcc	attcctttct	accttatgta	catcactgca	120
gtcttgggaa	atggagccct	catcctagtt	gtcctcagtg	aacacaccct	ccatgtcttc	180
ctatccatgc	tggttgccac	tgatatcctg	ctatccacca	ccactgtgcc	taaggccttg	240
gcgatcttct	gggtccacgc	tggtggagata	gcctttgatg	cctgcattac	tcagatgttt	300
ttcattcatg	ttgcctttgt	ggctgagtca	ggaatcctgc	tggtccatggc	atttgacagt	360
tatgtagcca	tttgtactcc	cttgagatac	actaccatct	taacttctat	ggtaaatgga	420
aaaatgaccc	tgacaatctg	gggacaaaagc	attgggacaa	tttttctctg	catattcctg	480
ctgaagaggc	tgccatactg	tcagaccaat	atcatccccc	actcatactg	tgagcacatt	540
ggggtggccc	aattggcctg	tgctgacata	actgtcaata	tctgggatgg	cttttcagtg	600
ccaatggcat	cgtttttggt	agatgttgca	ttcattgggt	tttccctacac	tttgatcctc	660
caggctgtgt	ttagacttcc	ttcccaggag	tcccagcaca	aagctcttaa	cacctgtggt	720
tctacattgg	agttgttctc	ctcttcttca	tccatcatt	ttttactttc	ctgaccacc	780
gctttggcaa	gaatatcccc	catcatgtcc	acatacttct	ggcaaattctc	tacttgcttg	840
ttcccccatg	cttaacccca	ttatctacgg	agagaagacc	aagcaaataca	gggacagtat	900
ggctcatatg	ttatctgtgg	tggtggaagtc	ttgagac			937

<210> 580

<211> 941

<212> DNA

<213> Unknown (H38g429 nucleotide)

<220>

<223> Synthetic construct

<400> 580

atgaagatga	agatagatcc	caaagtcaat	ggcacggagg	taactgaatt	tattctgttg	60
ggactgacta	gccagccaga	gctgcagcct	atgtcttttg	tggtattcct	cctgatttac	120
ctcatcaccc	tgactgggaa	atttgggatg	attttcctaa	tcagattcac	tcctcagctc	180
caaaccacac	tgtatttttt	ccttactcat	ttagcatgtg	tggtatattt	ttactccact	240
aatgtctctc	cacagagcct	gttaattttct	tatctgagaa	gaagaccatt	tcctacgctg	300
ggtgtctggc	ccagtgtttt	gtctttgtga	ctctgtctct	tactgagtat	tacatgcttg	360
gtgccatggc	ctatgactgc	tacatggcaa	tctgcaatcc	cctacattac	agcagcaaaa	420
tgtccagagc	agtttgcatc	tgcttggtga	ctttccccta	cttctggggg	tctatgggtg	480
gcacgatgca	agtaatactg	acctctcggt	tgctcttttt	tggaaccaac	accatcaacc	540
attttctactg	tactgaccca	cccctcttaa	tggtgacatc	ttctgacact	tacataaaac	600
aaactgcctt	gtttgtgtca	gcagggatta	acctcacagt	ttccctgtct	atcattctca	660
tctcctacat	tttcattttc	atcaccatta	tgaggatccg	ttccagtga	gggcagctca	720
aagccttctc	cacctgtggc	tcccacctga	cagctgtcac	tatgttctat	gggtccctat	780
tctgcatgta	cctgagacca	acaaatgagc	tgtctgttga	gcaagggaaa	atgggagtgg	840
tgttttgtat	ttttgtgagt	cccatgtctg	acctgtttat	ctaccgcctg	agaaacaagg	900
atgtgaaaca	ggccttgaaa	agagtgttta	tgagaaacct	t		941

<210> 581

<211> 958
 <212> DNA
 <213> Unknown (H38g430 nucleotide)

<220>
 <223> Synthetic construct

<400> 581
 atgagtccttc tattctgaga ctaagatatg agaaacttta caccactgtc tggattttatt 60
 atcctgggat tcacggatca cccagaatta cagtgtcttc tttttgtgtt gtttctcttc 120
 atctatatgt tcaccgttgt tggaaatctt ggcattgattc tattaatcaa gattgactca 180
 catctccata ctccaatgta ctttttcttc agtaacttgt gccttgttga cttctgttat 240
 tcttctgtca ttgccctaa tatgctgata aatttctggg tggagaaccc agtcatttca 300
 tttaatgaat gtgccactca attcttcttt tttggctcct ttgctggcat tgagggtttt 360
 ctgttggctg tcattggccta tgactgttat gtggccatct gcaagcctct gctttataca 420
 gtccctgatgt caccacacct cagtgccttc ctgggtgttag ccacatatct tttgggcttt 480
 gtaaatgctg ccattcacac tggcttcacc ttccagctgt cattctgcca ctccaatata 540
 attactatt tttttgtga tattccaccc ctccctgaaac tcttgttctg atacacacat 600
 caatgaggtt gtcatttttg cctttgccag ttttaatgaa ttgagctgtc tcctactgat 660
 tcttgtttcc tgtctctaca tccttgtctg catcttgaag atccactctg cagaagggag 720
 gcacaaggcc ttctccacct gtgcttccca cttggcggtg gtcactatct tctttgggac 780
 aatcctgttc atgtatctct gcgtcccagc tccagctact caatggatca agacaaagtg 840
 gtgtctgtct tacacagtag tcaccccat gttgaatcct ttcacttata gtttgagaaa 900
 caaggaagtc aaagcttctt taagtaaaat gtttaaaaca gtctcttata tctctact 958

<210> 582
 <211> 897
 <212> DNA
 <213> Unknown (H38g431 nucleotide)

<220>
 <223> Synthetic construct

<400> 582
 atgggattac caggcattca tgagtggcag cactggctct ccctgcccct gactctgctc 60
 tacctcttag ctcttggctg caacctcttc atcataatca ccattcaaca tgagaccgtg 120
 ctacatgaac ccatgtacca tttgctgggc atattagcag tgggtggacat tggcctggcc 180
 accaccatca tgcccaagat cctggccatc ttctggtttg atgccaaggc cattagcttc 240
 cccatgtgtt ttgtcagat ctatgccatc cactgcttct tctgcataga gtcaggcatc 300
 tttctctgca tggcagtaga cagatacata gccatctgtc gccctcttca gtaccctctc 360
 atagtacta aagcttttgt ctcaaagcc acagggttca tcatgctcag gaatggcctg 420
 ttgaccatcc cagtgcctat actggctgcc cagagacact actgttccag gaatgaaatc 480
 gagcactgcc tctgctctaa cttgggggtt atcagcctgg cttgtgatga catcactgtg 540
 aacaaatttt accaactgat gctagcatgg gtcttggctg ggagtgatat ggctctggta 600
 ttttcttctt atgctgtaat ctttactctt gtgctgaggg tgaactcagc agaagcaatg 660
 tccaaggctc tgagcacttg tagtcccatc ctcatcctca tcctcttcca cacaggatc 720
 attgtgctgt ctgtcacaca cttgcagag aaaaagattc cccttattcc tgtgttctct 780
 aatgtgctgc acaatgtcat cccccctgca ctcaaccccc tggcctgtgc actcaggatg 840
 cacaaactca gactgggctt tcagagactg cttggactgg gtcaggacgt gtccaag 897

<210> 583
 <211> 951
 <212> DNA
 <213> Unknown (H38g432 nucleotide)

<220>
 <223> Synthetic construct

<400> 583
 atgatgagac ttatgaaaga ggttcgagggc agaaatcaaa cagaagtaac agaatttctc 60
 ctcttaggac tttccgacaa tccagatcta caaggagtcc tctttgcatt gtttctgttg 120

atctatatgg	caaacatggt	gggcaatttg	gggatgattg	tattgattaa	gattgatctc	180
tgtctccaca	cccccatgta	tttctttctc	agtagcctct	ctttttaga	tgctctttac	240
tcttcttccg	tcactcccaa	gatgctgggtg	aacctcatgg	ctgagaataa	ggccatttct	300
tttcatggat	gtgctgcccc	gttctacttc	tttggtcctc	tcctggggac	tgagtgtctc	360
ctgttgccca	tgatggcata	tgaccgctat	gcagccattt	ggaaccccct	gctctaccca	420
gttctcgtgt	ctgggagaat	ttgctttttg	ctaatagcta	cctccttctt	agcaggttgt	480
ggaaatgcag	ccatacatat	agggatgact	tttaggttgt	ccttttgtgg	ttctaatagg	540
atcaaccatt	tctactgtga	caccccgcca	ctgctcaaac	tctcttgctc	tgatacccac	600
ttcaatggca	ttgtgatcat	ggcattctca	agttttattg	tcatcagctg	tgttatgatt	660
gtcctcattt	cctacctgtg	tatcttcatt	gccgtcttga	agatgccttc	gttagagggc	720
aggcacaagg	ccttctccac	ctgtgcctct	tacctcatgg	ctgtcaccat	attcttttga	780
acaatectct	tcatgtactt	gcgccctaca	tctagctact	caatggagca	agacaagggt	840
gtctctgtct	tttatacagt	aataatccct	gtgctaaatc	ccctcatcta	tagtttaaaa	900
aataaggatg	taaaaaaggc	cctaaagaag	atcttatgga	aacacatctt	g	951

<210> 584

<211> 951

<212> DNA

<213> Unknown (H38g433 nucleotide)

<220>

<223> Synthetic construct

<400> 584

atgagtcaca	ccaatgttac	catcttccat	cctgcagttt	ttgtccttcc	tggcatccct	60
gggttggagg	cttatcacat	ttggctgtca	atacctcttt	gcctcattta	catcactgca	120
gtcctgggaa	acagcatcct	gatagtggtt	attgtcatgg	aacgtaacct	tcatgtgccc	180
atgtatttct	tcctctcaat	gctggccgtc	atggacatcc	tgctgtctac	caccactgtg	240
cccaaggccc	tagccatctt	ttggcttcaa	gcacataaca	ttgcttttga	tgctgtgtgc	300
acccaaggct	tctttgtcca	tatgatgttt	gtgggggagt	cagctatcct	gttagccatg	360
gcctttgatc	gctttgtggc	catttgtgcc	ccactgagat	atacaacagt	gctaacatgg	420
cctgttgtgg	ggaggattgc	tctggccgtc	atcacccgaa	gcttctgcat	catcttccca	480
gtcatattct	tgctgaagcg	gctgcccttc	tgccctaacca	acattgttcc	tcactcctac	540
tgtgagcata	ttggagtggc	tcgtttagcc	tgtgctgaca	tcactgttaa	catttggtat	600
ggcttctcag	tgcccattgt	catggtcatc	ttggatgtta	tcctcatcgc	tgtgtcttac	660
tcactgatcc	tccgagcagt	gtttcgtttg	ccctcccagg	atgctcggca	caaggccctc	720
agcacttggt	gtcctccact	ctgtgtcatc	cttatgtttt	atgttccatc	cttctttacc	780
ttattgacct	atcatttttg	gcgtaatat	cctcaacatg	tccatatctt	gctggccaat	840
ctttatgtgg	cagtgccacc	aatgctgaac	cccattgtct	atggtgtgaa	gactaagcag	900
atacgtgagg	gtgtagccca	ccggttcttt	gacatcaaga	cttgggtgctg	t	951

<210> 585

<211> 915

<212> DNA

<213> Unknown (H38g434 nucleotide)

<220>

<223> Synthetic construct

<400> 585

atgcagagga	gcaatcatat	agtgactgag	tttatactgc	tgggcttcac	cacagaccca	60
ggaaatgcagc	tgggcctctt	cgtgggtgtt	ctgggcgtgt	actctctcac	tgtggtagga	120
aatagcaccc	tcactgtgtt	gatctgtaat	gactcctgcc	tccacacacc	catgtatttt	180
gtcgtctggaa	atctgtcgtt	tctggatctc	tggtattctt	ctgtctacac	cccaaagatc	240
ctagtgaacct	gcactctctga	agacaaaagc	atctcctttg	ctggctgcct	gtgtcagttc	300
ttcttctctg	cagggctggc	ctatagttag	tgctacctgc	tggctgccgt	ggcttatgac	360
cgctacgtgg	ccatctccaa	gcccctgctt	tatgcccagg	ccatgtccat	aaagctgtgt	420
gcattgtctgg	tagcagtcct	atattgtggt	ggctttatta	actcttcaat	catcaccaag	480
aaaacgtttt	cctttaactt	ctgccgtgaa	aacatcattg	atgacttttt	ctgtgatttg	540
cttcccttgg	tggagctggc	ctgtggcgag	aagggcggtc	ataaaattat	gatgtacttc	600
ctgctggcct	ccaatgtcat	ctgccccgca	gtgctcatcc	tggcctccta	cctctttatc	660

atcaccagt	tcttgaggat	ctcctcctcc	aagggtacc	tcaaagcctt	ctccacatgc	720
tcctcccacc	tgacctctgt	cactttatac	tatggctcca	ttctctacat	ctacgctctc	780
cccagatcta	gctattcttt	tgatatggac	aaaatagttt	ctacatttta	cactgtggta	840
ttccccatgt	tgaatctcat	gatctacagc	ctaaggaata	aggatgtgaa	agaggctctg	900
aaaaaacttc	tccca					915

<210> 586

<211> 942

<212> DNA

<213> Unknown (H38g435 nucleotide)

<220>

<223> Synthetic construct

<400> 586

atgcttccct	ctaatatcac	ctcaacacat	ccagctgtct	ttttgttgg	aggaattcct	60
ggtttgggaa	acctgcatgc	ctggatctcc	atccccctct	gctttgctta	tactctggcc	120
ctgctaggca	actgtaccct	tctcttcatt	atccgggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcaacc	attgacttgg	ttctttcttc	tacaacgctg	240
ccaaaatgc	ttgccatatt	ctgggttcagg	gatcaggaga	tcaacttctt	tgctgtctg	300
gtccagatgt	tcttccttca	ctccttctcc	atcatggagt	cagcagtgt	gctggccatg	360
gcctttgacc	gctatgtggc	catctgcaag	ccattgcaact	acacgacggt	cctgactggg	420
tccctcatca	ccaagattgg	catggctgct	gtggcccggg	ctgtgacact	aatgactcca	480
ctcccccttc	tgctcagacg	cttcacttac	tgccgaggcc	cagtgttgc	ccattgtctac	540
tgtgaacaca	tggctgtgg	aaggctggcg	tgtggggaca	ctagcttcaa	caatatctat	600
ggcattgctg	tggccatggt	tagtgtggtg	ttggacctgc	tctttgttat	cctgtcttat	660
gtcttcatcc	ttcaggcagt	tctccagctt	gcctctcagg	aggcccgccta	caaggcattt	720
gggacatgtg	tgtctcatat	aggtgccatc	ctgtccacct	acactccagt	agtcactctc	780
tcagtcatgc	accgtgtagc	ccgccatgct	gccccctcgtg	tccacatact	ccttgctatt	840
ttctatctcc	ttttcccacc	catggtcaat	cctatcatat	atggagtcaa	gaccaagcag	900
attcgtgagt	atgtgctcag	tctattccag	agaaagaaca	tg		942

<210> 587

<211> 937

<212> DNA

<213> Unknown (H38g436 nucleotide)

<220>

<223> Synthetic construct

<400> 587

atgttaaaga	aaaaccatac	agccgtgact	gagtttggtc	tcctgggact	gacagatcgg	60
gctgagctgc	agtccccttc	ttttgtggta	tttctagtca	tctaccttat	cacagtaate	120
ggcaatgtga	gcatgatctt	gttaatcaga	agtgaactga	cactacacac	tccaatgtac	180
ttcttctctca	gtcacctctc	ctttgtagat	ctctgttata	ccaccaatgt	tactcctcag	240
atgctgggta	actttttatc	caagagaaaa	accatttcct	tcacgcggctg	ctttatccaa	300
tttcaactttt	tcattgcaact	ggtgattaca	gattattata	tgctcacagt	gatggcttat	360
gaccgctaca	tggccatctg	caagcccctg	ttatatggaa	gcaaaatgac	cagggtgtgtc	420
tgctctgtgc	tcgctgtctg	tccttatatt	tatggctttg	caaatgggtct	aagcacagac	480
cacctgatgc	cttcgtctgt	ccttctgtgg	acccaatgac	atcaaccact	tttactgtgc	540
ggaccacccc	ctcttagtcc	tcgcctgtct	agatacttat	gtcaaagaga	ccgccatggt	600
ggtgggtggct	ggttccaacc	tcatttgtct	tctcaccgtc	atcctcattt	cctacacttt	660
catcttcaact	gccattctgc	gtatccacac	tgctgagggg	aggcgcaagg	ccttctccac	720
ctgcgggtct	catgtgaccg	ctgtcactgt	cttctatggg	acactgttct	gcatgtacct	780
gaggccccct	tctgagacat	ctatacaaca	ggggaaaatt	gtagctgttt	tttatactct	840
tgtgagtcgg	atgttaaacc	cattgatcta	cagcctgagg	aataaagacg	ttaaaagaag	900
tataaggaaa	gttattcaaa	agaaactggt	tgctaag			937

<210> 588

<211> 942

<212> DNA

<213> Unknown (H38g437 nucleotide)

<220>

<223> Synthetic construct

<400> 588

atgtcagcct	ccaatatcac	cttaacacat	ccaactgcct	tcttggtggt	ggggattcca	60
ggcctggaac	acctgcacat	ctggatctcc	atccctttct	gcttagcata	tacactggcc	120
ctgcttggaa	actgcactct	ccttctcatc	atccaggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcagcc	atcgacctgg	tcctttcctc	ctcagcactg	240
cccaaaatgc	ttgccatatt	ctggttcagg	gatcgggaga	taaacttctt	tgctgtctg	300
gcccagatgt	tcttccttca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	tatctgcaag	ccactgcaat	acaccaaggt	cctgactggg	420
tccctcatca	ccaagattgg	catggctgct	gtggcccggg	ctgtgacact	aatgactcca	480
ctccccctcc	tgctgagatg	tttccactac	tgccgaggcc	cagtgatcgc	tcactgctac	540
tgtgaacaca	tggtgtgggt	gaggctggcg	tgtggggaca	ctagcttcaa	caatatctat	600
ggcatcgctg	tggccatggt	tattgtgggt	ttggacctgc	tccttggtat	cctgtcttat	660
atctttatct	ttcaggcagt	tctactgctt	gcctctcagg	aggcccgtca	caaggcattt	720
gggacatgtg	tctctcatat	aggtgccatc	ttagccttct	acacaactgt	ggtcactctt	780
tcagtcatgc	accgtgtagc	ccgccatgct	gccccctcat	tccacatcct	ccttgccaat	840
ttctatctgc	tcttcccacc	catggtcaat	cccataatct	atggtgtcaa	gaccaagcaa	900
atccgtgaga	gcactctggg	agtattccca	agaaaggata	tg		942

<210> 589

<211> 936

<212> DNA

<213> Unknown (H38g438 nucleotide)

<220>

<223> Synthetic construct

<400> 589

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ggcctggagc	acctgcacat	ctggatctcc	atccctttct	cagcatatac	actggccctg	120
cttggaaact	gcacctcctt	tctcatcatc	caggctgatg	cagccctcca	tgagcccata	180
tacctctttc	tggccatggt	ggcagccatc	gacctgggtc	tttctcctc	agcattggcc	240
aaaatgcttg	ccatattctg	gttcagggat	cgaggagatca	acttttttgc	ctgtctggtc	300
cagatgttct	tccttcactc	cttctccatc	atggagtcag	cagtgtgctc	ggccatggcc	360
tttgaccgct	atgtggccat	ctgcaagcca	ctgcaactaca	ccacgggtcct	gactgggtcc	420
ctcatcacca	agattggcat	ggctgctgtg	gcccgggctg	tgacactaat	gactccactc	480
cccttcctgc	tgagatgttt	ccactactgc	cgaggcccag	tgattgcccg	ctgctactgt	540
gaacacatgg	ctgtgggtcag	gctggctgtg	ggaacactag	cttcaacaat	atctatggca	600
ttgctgtggc	catgttttatt	ggagtgttgg	atctattctt	tatcatccta	tcttatactt	660
ttatccttca	ggcagttcta	caactctcct	ctcaggaggc	ccgctacaaa	gcatttgggg	720
catgtgtctc	tcacataggt	gccatcttag	ccttctacac	accttcagtc	atctcttcag	780
tcatgcaccg	tgtggcccg	tgtgctgcgc	cacacgtcca	cattctcctc	gccaatttct	840
atctgtctct	cccacccatg	gtcaatccca	tcactctacg	cgtaaagacc	aagcagatcc	900
gtgacagtct	tgggagtatt	cccagaaaag	gatgtg			936

<210> 590

<211> 955

<212> DNA

<213> Unknown (H38g439 nucleotide)

<220>

<223> Synthetic construct

<400> 590

atgacaaccc	acaactccac	tggtagcagc	cactcactct	tcattctgct	gagcattcct	60
ggcttagaag	accagcacac	atggatgtct	ctccccctct	ttatttccta	ccttggtgct	120
ttccttggga	acagcctcat	catcttcatc	atcatcactg	aatgcagcct	ccacgaaccc	180

atgtaccttt	tcctctgcat	gctggctgtg	gctgacctta	tcctgtctac	taccactgtg	240
cccaaggccc	tagccatatt	ttggttctat	gctggagcaa	tatcccttgg	tggctgtgtt	300
acccaaatct	tctttatcca	tgtacacctc	atcgaggaat	caggaattct	gttggcgatg	360
gcacttgacc	gctatgtggc	catctgtgat	ccactgcact	ataccacagt	gctcagtcgt	420
gcaaaaatca	caaagattgg	cttggctgtg	gtcctgagaa	gcttctgtgt	gatcatgcc	480
gatgtgtttc	tggtaaagcg	gctgcctttc	tgccatagca	atctgctgcc	acatacctac	540
tgtgagcaca	tggctgttgc	caagtttgc	tgtgctgata	ttcatgtcaa	tgtttggtat	600
ggcttgtctg	tccttctcta	tactgtagt	ctagatgcct	tgcttatctt	agtgtcctaa	660
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cataattacc	cagcggtttg	ggcaccatgt	tcctctccat	acacacattc	tgtgggtaa	840
tgtctgggtg	ttggctcctc	ccatgctgaa	ccccatcatt	tatgggatca	acaccaggca	900
gattcaagag	tgtgtgctca	gtcttttgtc	ctcacagagg	aatgatgct	agatt	955

<210> 591

<211> 939

<212> DNA

<213> Unknown (H38g440 nucleotide)

<220>

<223> Synthetic construct

<400> 591

atgaattggg	taaagtacag	catcatacag	gagtttattc	tgctgggttt	ctcagatcga	60
ccttggtcgg	agtttcact	ccttgtgggc	ttcttgattt	cttacactgt	gaccatcttt	120
ggcaatctga	ccattattct	agtgtcacgc	ctggacacca	aacttcatac	ccccatgtat	180
ttttttctta	ccaatctatc	actcctggat	ctttgttaca	ccacatgtac	agtcccacaa	240
atgctagtaa	atttatgcag	catcaggaaa	gtaatcagtt	atcgtggctg	tgtagcccag	300
cttttcatat	ttctggcctt	gggggctact	gaatatcttc	tcctggccgt	catgtccttt	360
gataggtttg	tagctatttg	tgggcctctc	cattactcag	ttatcatgca	ccagagactc	420
tgccctccagt	tggcagctgc	atcctgggtt	actggtttta	gtaactcagt	gtggttgtct	480
acctgactc	tccagctgcc	actctgtgac	ccctatgtga	tagatcactt	tctctgtgaa	540
gtccctgcac	tgtcgaagtt	atcttgtgtt	gagacaacag	caaagtgggc	tgaactattc	600
cttgtcagtg	agctcttcca	tctaataccc	ctgacactca	tccttatata	atatgctttt	660
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caaccacccc	cgcccagctc	caaggaccaa	ggaaagatgg	tttctctctt	ctatggaatc	840
attgcaccca	tgtgaaatcc	ccttatatat	acacttagga	acaaggaggt	aaaggaaggc	900
tttaaaaggt	tggttgcaag	agtctttctta	atcaagaaa			939

<210> 592

<211> 997

<212> DNA

<213> Unknown (H38g441 nucleotide)

<220>

<223> Synthetic construct

<400> 592

atggaaaaat	ccaatgtcag	ctcagtgat	ggttttatct	tgggtgggttt	ctctgatcgt	60
cccaagctgg	agatgggtgct	ctttacagta	aattttattc	tgtattcagt	ggctgtgctg	120
ggaaattcaa	ccataatcct	tgtgtgtata	ttagactctc	aacttcatac	cccaatgtac	180
ttctttctgg	caaactcttc	ctttctagat	ctctgcttca	gtactagttg	catcccacaa	240
atgctggtaa	acctctgggg	ccctgacaag	actattagct	gtgctggctg	tgttgtccag	300
cttttctctt	tcctttctgt	caggggaatt	gagtgcatcc	ttctggctgt	catggcctat	360
gacagctatg	ctgcagctcg	caaaccgttg	cgctatctgg	tcattatgca	cctccagctg	420
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ccactaacia	tgacctctc	cagaagtggc	cgccgccgag	ttaaccattt	cctctgtgaa	540
agccagcact	gatcaagatg	gcttgttttg	atgttcgtgc	agtggaaatg	ctggcttttg	600
cttttgccgt	tctcattgtc	ctactgcccc	tcactcttat	tcttgtctcc	tacggctaca	660
ttgctgcagc	tgtgctaagc	atcaagtcag	ctgccaggca	atggaaggcc	ttccatacct	720

gtagctctca	cctcacagtg	gtctccctgt	tttatgggag	catcatctat	atgtatatgc	780
agccaggaaa	cagttcttcc	caagaccaag	gcaagtttct	cactctcttc	tacaacctgg	840
tgactcctat	gttgaatctg	ctcatctata	ctttaaggaa	taaggagggtg	aaaggagcac	900
tgaagaaggt	tttggggagg	caataatgaa	ctggagaaat	atgataagtt	gtgaagtctt	960
aggcaaaata	tcttttccaa	atacatttat	tttgtgc			997

<210> 593

<211> 950

<212> DNA

<213> Unknown (H38g442 nucleotide)

<220>

<223> Synthetic construct

<400> 593

caagtagttc	atacaggctt	ttctccctag	ctatacgtct	tcaccctgct	gggaaatggg	60
gcacccctggg	gtcatctctg	ctggactcca	gactgcacac	ccccatgtac	ttctttctct	120
cacacctggc	catcattgat	atttcgtatg	cttccaacaa	tgcccccaag	atgctgacaa	180
accttggtctt	gaacaagaga	aaaacaatct	cctttgtccc	atgcacaatg	cagacctttt	240
tatacatggc	ttttgtctac	actgagtgtc	tcactcttgg	aatgatgtcc	tacgatcggg	300
acatggctgt	ctgccaccct	ctgcaatatt	ctgtcatcat	gagatgggga	gtgtgcacag	360
tcctggctgt	cacttcttgg	gcattgtggt	ccttctggcc	ctgggtccatg	tggttctcat	420
cctgaggctg	cccttctgtg	ggccccatga	aatcaaccac	ttcttctgtg	aaatcctgtc	480
tgctctcaag	ttggcctgtg	ctgacacctg	gctcaaccag	gtgggtcatct	ttgcttcttc	540
agtgttcatc	ctgggtggggg	cgctctgcct	ggtgctggtc	tcctactcgc	gcacccctggc	600
ggccatcttg	aggaatcagt	ctggggaggg	gcgcagaaag	ggcttctcca	cctgctactc	660
ccacctttgc	atgggtgggac	tcttcttttg	cagcgccatt	gtcacgtaca	tggcccccaa	720
gtcccgccat	cctgaggagc	agcagaaagt	tctttccctg	ttttacagcc	ttttcaatcc	780
aatgctgaac	ccccctgata	tatagcctaa	ggaatgcaga	gggtcaagggc	gccctgagga	840
gtgcaactgag	gaaggagagg	ctgacgtgag	acatctcaaa	gggaaccatg	gggaggggagc	900
cttgcctccct	gcaaaatata	gaagttggct	tttttttttg	tcttctgcta		950

<210> 594

<211> 711

<212> DNA

<213> Unknown (H38g443 nucleotide)

<220>

<223> Synthetic construct

<400> 594

cagatgctga	cagattgggtg	gggacctaat	aggaccacaa	gttacgtgaa	ctcaccattc	60
aattccctgt	ctctctgtag	ttatgtgcc	ctatataatt	tctacaatta	ttttataatt	120
atatgccatc	ctttgtaata	tttgtaatac	atgaacctat	atctcctcct	taatcttact	180
ttaatacttg	agtgataaatt	cattcatttt	tgctcatcatg	tatactctca	tcctaaaatt	240
cccaagggtat	gaaaaaaaaa	aaccttcagg	ataattccct	ccatgtgttg	ctagctatgc	300
tgaaaacagt	ttttctagat	gctacaattg	aagaaatgtc	tgtatttggtg	ttaatacaat	360
gtaaatgtcc	taatatgcct	tatcagtaat	tttacctgct	atggctacat	tgagggtgcac	420
taagaatgaa	tactagtaat	taaattagaa	gcaagctgag	aaatcagtat	catcatcatc	480
atcataggtg	tcatttccatt	atagattcaa	tcttctatgg	aatcattgtg	taaatgctct	540
tgaagatggg	aacaactcct	cccaagacca	agaaatgatt	ctttatcttg	ttttacacta	600
tactaactcc	aagtctcaaa	cttctagttt	atctgttaag	aataaagata	taaaggatat	660
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<210> 595

<211> 765

<212> DNA

<213> Unknown (H38g444 nucleotide)

<220>

<223> Synthetic construct

<400> 595

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cctaagatgg	catctgattt	tctgcatgga	aacaagtcta	tctccttcac	tgggtgtggg	120
attcatagtt	tcttcttcac	gacttttagc	gttgtagaag	cgctactcct	gatatcaatg	180
gcctatgttc	gttgcatgac	tatttgcttt	cctctccact	atctcatgcg	catgagcaaa	240
agagtgtgtg	tgctgatgat	aacaggatct	tggatcatag	gctcgatcaa	tgcttgtgct	300
cacactgtat	atatactcca	tattccttat	tgcccatcta	gggttatcaa	tcattttctc	360
tgtgatgtcc	cagcaatggt	gactctggcc	tgcatggaca	cctgggtcta	tgagggcaca	420
gtgcttttga	gcgcccacat	ctttctcgtg	tttcccttca	ttgctatttc	atgttctctat	480
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ctgacctgca	gcacccacct	cactgtagtg	actttctact	atgcaccctt	tgcttacacc	600
tatctacgcc	caagatccct	gcgatctccg	acagaggaca	aggttctggc	tgtcttctac	660
accatcctca	ctccaatgct	caaccccatc	atctacagcc	tgagaaacaa	ggaggtgatg	720
ggggccctga	cacgagtgat	tcagaaaatc	ttttcagtga	aaata		765

<210> 596

<211> 960

<212> DNA

<213> Unknown (H38g445 nucleotide)

<220>

<223> Synthetic construct

<400> 596

ctgtcatgac	caaccagagc	tgcccagaaa	cagttcatct	tactgggttt	ctcaggcaga	60
cccaggctgg	agcatgtcct	ctttgtgttt	gtcctcatct	tctaccttgt	gaccttagtg	120
ggcaacatca	tcattatctt	gatctccac	ctggaccct	gcctccacat	gcccattgtac	180
ttcttctca	ctaactgtc	tttcttagat	ctctgcttca	ccaccagttc	tatccccag	240
ctgcttttca	atctaggcag	cccaggcaag	actatcagcc	acacgggctg	tgccatccag	300
ctcttcatgt	tcctgggcct	gggtggcaag	agtgtattct	cttggcagcc	gtggcctatg	360
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gctggaagtt	ggtgtctgtg	gcccgggggt	gttgactcc	tcagttctct	agttatgtct	480
cctgtgacta	tgaagctgcc	acgatgtgga	agatgtaagt	tgaaacattt	cctgtgtgag	540
atgccagctc	taataaaaat	cacctgtgtg	gacacagtgg	ctatggagag	cactgttttc	600
accttatcgg	tagtaattgt	cctgatgcct	ttgtgtctta	tcctcatctc	ttatagctac	660
attgccctag	cagtgtgag	aatcaagtc	gccgcaggaa	gaagggaagg	cttcaatatg	720
tgcggtccc	acctcaccgt	ggtctccttg	ttttatggga	atattatcta	tatgtatatg	780
caaccatgaa	ataattcttc	tcaggaccaa	gggaagttcc	ttaccctttt	ctacaactta	840
atgaccccca	tgttaaacc	tgctcatctat	acactgagaa	acaaggatgt	aaaaggtgca	900
ctgaagaggc	ttgtgtctag	aaaacacagt	gacagtgact	gctcttgaga	ctgcttcttt	960

<210> 597

<211> 377

<212> DNA

<213> Unknown (H38g446 nucleotide)

<220>

<223> Synthetic construct

<400> 597

atggaaaatt	acaatcaaac	atcaactgct	ttcatcttgt	tgggattgtc	gccaccacca	60
aaaattggcc	atttcatctt	cattctcatt	aatttcgttt	tcctaattgg	tctaattgga	120
aacctatcca	tgattcttct	catcttcttg	gacatccatc	tccacacacc	catgtatttc	180
ctacttagtc	agctctccct	cattgacct	aatttatatt	ccaccattgt	tcctaagatg	240
gtttatgatt	ttcatgtat	ggaaacaagt	ctatctcctt	cactgggtgt	gggattcaga	300
gtttcttctt	cctgacttta	gcagggtgag	aagcgctgct	cctgacatca	atggcctatg	360
atcgttatgt	ggctatt					377

<210> 598

<211> 979

<212> DNA

<213> Unknown (H38g447 nucleotide)

<220>

<223> Synthetic construct

<400> 598

atggaaagag	ctaacgacag	caccttctct	ggattcatcc	tectgggctt	ctccaacagg	60
cctcagctgg	aaacagctct	ctttgtggtc	atcttgatca	tctactttct	gagctttctg	120
ggcaatggca	ccattatact	tttatccatt	gtagatcctc	gcctccatac	ccctatgtat	180
ttcttctctt	ccaatctctc	ttttatggat	ctttgtttga	ccacttgtag	tgtccctcag	240
acactgggtca	actttaaggg	gaaggacaag	accatcacct	atgggtggctg	cgtgaccagg	300
ctattcattg	ccttgggact	cggggggagt	ggagtgtgtc	ttattgtctg	ccatggccta	360
tgaccgctat	gcagccgtct	gccgccact	ccactacatg	gtgagcatgc	atccccaact	420
ttgcttgtag	ttggttgtaa	ccacttggct	cacagggttt	ggcaattctg	tgatacagac	480
agcattgacc	atgactctcc	ccctctgtga	taaaaaccaa	gtggatcatt	tcttctgtga	540
agttccagtg	atgctgaaac	tgctctgcac	caacacctcc	atcaacgagg	ctgaaatctt	600
tgctgtcagt	gtcttcttct	tggtgggtgcc	tctctcactc	atcttagcat	cctatgggtca	660
cattactcat	gcagtctctga	agataaagtc	agctcaaggg	aggcagaagg	cttttggaac	720
ctgtgggttct	cacctctctg	tagtgatcat	tttctttggg	acactcatct	ccatgtacct	780
ccagcctccc	tccagttatt	cacaggatgt	gaacaaaagc	attgactctt	tctatactct	840
ggtgactcct	ctactgaatc	ccctaattta	cactctgagg	aacaagggaag	tcaaaggggc	900
aactaagaag	actagtgggg	aggaccatag	atgcatgaga	aagttaacgc	agggtttgca	960
gttccaaaca	tttgtgcac					979

<210> 599

<211> 936

<212> DNA

<213> Unknown (H38g448 nucleotide)

<220>

<223> Synthetic construct

<400> 599

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ataattgacc	ttttcttctt	cattctcatt	gttttcattt	tctgatggc	tctaattgga	120
aacctgtcca	tgattcttct	catcttcttg	gacacccatc	tccacacacc	catgtatttc	180
ctactgagtc	agctctccct	cattgacctt	aattacatct	ccaccattgt	tcctaagatg	240
gcactctgatt	ttctgcatgg	aaacaagtct	atctctctca	ctgggtgtgg	gattcagagt	300
ttcttcttct	tggcattagg	agggtgcagaa	gcactacttt	tggcatctat	ggcctatgat	360
cgttacattg	ctatttgctt	tctctctccac	tatctcatcc	gcatgagcaa	aagagtgtgt	420
gtgctgatga	taacagggtc	ttggatcata	ggctcgatca	atgcttgtgc	tcacactgta	480
tatgtactcc	atattcctta	ttgccgatcc	agggccatca	atcatttctt	ctgtgatgtc	540
ccagcaatgg	tgactctggc	ctgcatggac	acctgggtct	atgagggcac	agtgtttttg	600
agtgccacca	tctttctcgt	gtttcccttc	attgggtattt	catgttccta	tggccagggt	660
ctctttgtctg	tctaccacat	gaaatctgca	gaagggagga	agaaagccta	tttgacctgc	720
agcaccacc	tactgtagt	aactttctac	tatgcacctt	ttgtctacac	ttatctacgt	780
ccaagatccc	tgcatctcc	aacagaggac	aaggttcttg	ctgtcttcta	caccatcctc	840
accccaatgc	tcaaccccat	catctatagc	ctgaggaaca	aggaggtgat	gggggccctg	900
acacgagtga	gtcagagaat	ctgctctgtg	aaaatg			936

<210> 600

<211> 936

<212> DNA

<213> Unknown (H38g449 nucleotide)

<220>

<223> Synthetic construct

<400> 600

atgcccaatt	caaccaccgt	gatggaattt	ctctcatga	ggttttctga	tgtgtggaca	60
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ctacagattt tacattctgc atccttcttt atgttgatt tggtaactct aatgggaaac      120
atcctcattg tgaccgtcac cacctgtgac agcagccttc acatgcccac gtacttcttc      180
ctcaggaatc tgtctatctt ggatgcctgc tacatttctg ttacagtccc tacctcatgt      240
gtcaattccc tactggacag caccaccatt tctaaggcgg gatgtgtagc tcaggtcttc      300
ctcgtggttt tttttgtata tgtggagctt ctgtttctca ccattatggc tcatgaccgc      360
tatgtggctg tctgccagcc acttcactac cctgtgatcg tgaactctcg aatctgcatc      420
cagatgacac tggcctccct actcagtggc cttgtctatg caggcatgca cactggcagc      480
acattccagc tgcccttctg tcgggtccaac gttattcacc aattcttctg tgacatcccc      540
tctctgtga agctctcttg ctctgacacc ttcagcaatg aggtcatgat tgtgtctct      600
gctctggggg taggtggcgg ctgtttcacc tttatcatca ggtcttacat tcacatcttt      660
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cctcacatcc tgggtggtgc agtcttcttc agttcatgct cttctgtgta cctcaggcca      780
cctgcgatac ctgcagccac ccaggatctg atcctttctg gtttttattc cataatgect      840
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aaaatcatga agagaatttt ttattcagaa aatgtg      936

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<210> 601

<211> 931

<212> DNA

<213> Unknown (H38g450 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(931)

<223> n = A,T,C or G

<400> 601

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aggaatgccc cactggaaaa atacaatcaa acatcaactg atttcatctt attgggggac      60
ttcccaccat ccagaattgg ctttctcttc ttcattctcc ttgttctcat tttgtctatt      120
gctttaattg gcaatcagtc cgtgatcctt ctcattctct tggacactca tctccacacg      180
cccatattat tcttacttag tcggctctac ctcattgacc taaattacat ctccactatt      240
gtccccagat gttttctgat tttctgtttg gaaacaagtc tatttccttc attgggtgtg      300
gaattcagag tttcttcttt gtgactttag cagggtgcaga aatgctgcc a tgacatcaa      360
tggcctgtga tcattatgta gctgtttgct ttcctctcca ctatcccatc catatgagca      420
agatagtatg tgctgatgat aataggatct tggataatgg gctctatoga cacttgtgct      480
cacatttcat atatgcccc a taccctggt gctcagccag ggctgtgatg tcccagccat      540
gggtgactctg gccttcgtgg acacctgggt ctatgagtgc acagtgtttt tgagcacaac      600
cctctttctc atgtttacct ttattggtat tgcattgtcc tatgggtgagg ttctccttac      660
tgtctaccac attaaatctg cagaagggag gaagaaggcc tattegacct gtagcaccca      720
cctcactgta gtaattntct actatgcaat gtttgcttat acctatctat atccaagata      780
cctgcaatct ccaacagagg acaaggttct ggctgtgttc tacaccatcc tcacctcaat      840
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<210> 602

<211> 577

<212> DNA

<213> Unknown (H38g451 nucleotide)

<220>

<223> Synthetic construct

<400> 602

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agacacacag agccacggaa tctcacaggt gtctgagaat tctcctcctt gggactctca      60
gaggatccag aactgcagcc tgtcctcgct ttgctgtccc tgctcctgtc cctgtccttg      120
tatctggtca tggttctgag gaacctgtc agcatcctgg ctgtcagctc tgactcccc      180
ctccataccc ccatgtactt ctctctctcc aacctgtgct gggctgacat cgggttccact      240
tcggccacgg tccccagggt gactgtggac atgcagtcgc atagcagagt catctctcat      300
gcgggctgcc tgacacagat gtctttcttg gtcctttttt gcatgtatag aatgcatgct      360

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cctgactgtg atggcctatg acggctttgt agccatctgt ctccctctgc actacccagt	420
catcatgaat cctcacctct gtgtcttctt cgttttggtg tcctttttcc ttagcctgtt	480
ggattcccag ctgcacggtt ggattgtgtg acaattcacc atcatgaaga atgtggaaat	540
ctctcatttt gtaagtgacc cctctcaact tctcaac	577

<210> 603

<211> 952

<212> DNA

<213> Unknown (H38g452 nucleotide)

<220>

<223> Synthetic construct

<400> 603

atggacagaa gaaaccagac ctgcacttat gaatttcttc tcatgggctt ctctgaacac	60
caggagcagc aggctctttt gtttgggctt ttcctgggtca tgtacttggt cactgtgttg	120
gagaacctgc taatcatcct ggccattggc tctgacctgc acctccacac ccccatgta	180
cctcttcctg tccaacctgt cctttttgga tattggcttt atctctacaa taattcccaa	240
gatgctagat catattagct caggaattaa gctgatttct tatggggagt gtctgacaca	300
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ccttgaccgc tatgtggcca tcagccatcc tctccattat gccctaacca tgaactccca	420
acgctgtgtc ctgttgggtg ctgtgtcatg ggtgatcact attttacatg ccctagtgc	480
taccctccta gtgaccaggc tttccttctg tgggccaaat attatccctc acttcttctg	540
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ttacattgca ttggccatcc tgagaattga ttccccaagg ggtaagcaaa gggccttctc	720
cagctgcact tcccacctct ctgtagtctc tctgttctat agcacagcta tcggtgtcta	780
tttatgtcct ccatcatccc actcagatgg aaaggacaga gtcttctcag tcatgtacac	840
gggtggtgact cccatgttga accccttcat ctacagcctg aggaacaggg atatgaaggg	900
ggcactggga aaactgcttg gaataaaaac atcctaacac cttactcaa ga	952

<210> 604

<211> 754

<212> DNA

<213> Unknown (H38g453 nucleotide)

<220>

<223> Synthetic construct

<400> 604

catttgtagt ggtgcgtggt cagatacctg ggtattgtgg tggagatata catagtcttt	60
tgaacattcc gttgtaggtc gctggtagct ggatatgtcc tttaaacttt tgtggcaatt	120
catttgagaa gaaacgcagc tttttctatt gatttcttat gctataagta aaggatgcaa	180
gacattaatt agacaaaata aggtaaaatt ttgtattcgc ttagagagtt taaggaggcta	240
ttagccacta gtctctatag tgcctaagta aatcgattct gcttaataaa ctgctacctg	300
gcttagtaag taaacaaatt gaaacttatt ttaggaaaga aatatatatt cttatatcta	360
catcagattc tcttatgtag aaacactaga gggatgaatga ggagttaatg taagcagcat	420
catatttttg ctcattectt tctctatgat ttctgcttct tctgtccaaa tctgtgagg	480
tgctctctag atgaaattat cacaggcatg gaaaagggtca tttccactt ggtccatcct	540
catgattgca gttgtaacat actgggactc attcattttc acatatgtat atgagactta	600
aatcatccac atttcaggcc aggttaagtt tctagaaata ttctatgctt tccttgcaact	660
tacactcaat cctgtcgtct acagcgttgg cactgacagt gttctggtgg caatgaaaaa	720
tatgctctag agcaacattc tacataaaaa aaag	754

<210> 605

<211> 939

<212> DNA

<213> Unknown (H38g454 nucleotide)

<220>

<223> Synthetic construct

<400> 605

atggaccaga	tcaaccacac	taatgtgaag	gagtttttct	tcctggaact	tacacgttcc	60
cgagagctgg	agtttttctt	gtttgtggtc	ttctttgctg	tgtatgtagc	aacagtcctg	120
ggaaatgcac	tcattgtggt	cactattacc	tgtgagtcct	gcctacacac	tcctatgtac	180
tttctcctgc	ggaacaaatc	agtcctggac	atcgtttttt	catctatcac	cgccccaaag	240
ttcctgggtg	atctttttatc	agacaggaaa	accatctcct	acaatgactg	catggcacag	300
atctttttct	tcacttttgc	tggtggggca	gatatttttt	tcctctctgt	gatggcctat	360
gacagatacc	tgcaatcgc	caagccccctg	cactatgtga	ccatgatgag	gaaagaggtg	420
tggtgggcct	tggtgggtggc	ttcttgggtg	agtgggtggt	tgcattcaat	catccaggtg	480
attctgatgc	ttccattccc	cttctgtggc	cccaacacac	tggatgcctt	ctactgttat	540
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tctaacaacg	gactgggtgac	cctgctctgg	ttcctcctgc	tcctgggctc	ctacactgtc	660
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atgctgaacc	ccatcatcta	ttccttgaga	aatcaagaga	tgaagtcagc	catgcagagg	900
ctgcagagga	gacttggggc	ttccgagagc	agaaaatgg			939

<210> 606

<211> 927

<212> DNA

<213> Unknown (H38g455 nucleotide)

<220>

<223> Synthetic construct

<400> 606

atggaaagaa	tcaaccacac	cagcagtgtc	tccgagttta	tcctcctggg	actctcctcc	60
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acaggggaacc	tgctcatcat	cctggccatt	cgcttcaacc	cccatcttca	gaccctatg	180
tatttcttct	tgagttttct	gtctctcact	gatatttgct	ttacaacaag	cgttgtcccc	240
aagatgctga	tgaacttcct	gtcagaaaag	aagaccatct	cctatgctgg	gtgtctgaca	300
catagtgatt	ttctctatgc	cttgggcaac	agtgcagct	gccttctggc	agtcatggcc	360
tttgaccgct	atgtggccgt	ctgtgaccct	ttccactatg	tcaccaccat	gagccaccac	420
cactgtgtcc	tgctgggtggc	cttctcctgc	tcatttcttc	acctccactc	actcctgcac	480
acacttctgc	tgaatcgtct	caccttctgt	gactccaatg	ttatccacca	ctttctctgt	540
gacctcagcc	ctgtgctgaa	attgtcctgc	tcttccatat	ttgtcaatga	aattgtgcag	600
atgacagaag	cacctattgt	tttgggtgact	cgttttctct	gcattgcttt	ctcttatata	660
cgaatcctca	ctacagttct	caagattccc	tctacttctg	ggaaacgcaa	agccttctcc	720
acctgtgggt	tttacctcac	cggtgtgacg	ctcttttatg	gaagcatctt	ctgtgtctat	780
ttacagcccc	catccaccta	cgctgtcaag	gaccacgtgg	caacaattgt	ttacacagtt	840
ttgtcatcca	tgctcaatcc	ttttatctac	agcctgagaa	acaaagacct	gaaacagggc	900
ctgaggaagc	ttatgagcaa	gagatcc				927

<210> 607

<211> 939

<212> DNA

<213> Unknown (H38g456 nucleotide)

<220>

<223> Synthetic construct

<400> 607

atggccaatg	tcaccttggt	gacaggattt	cttcttatgg	ggttttctaa	tatccagaag	60
ctgcggattt	tatatgggtg	gctcttctca	ctgatttacc	tggcagccct	aatgagtaac	120
cttctcatca	ttactctcat	taccctggac	gtaaagctcc	aaacacccat	gtactttctc	180
ctgaagaact	tatccttttt	ggatgtcttc	ctgggtgtctg	ttccaatccc	aaaattcatt	240
gtcaacaacc	taaccacaaa	caattccatt	tccattctag	gatgtgcctt	ccagctactt	300
ttaatgactt	ccttctcagc	aggagagata	tttatcctca	ctgccatgtc	ctatgaccgc	360
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ttaatggcaa	gtgtttcctg	ggccattgga	gggctctttg	gtactgcgta	cacagctggc	480
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ccccatctca	ctgtttttcac	tgttttttatc	ataactgctt	attttgttta	tcttaagcca	780
ccttcaaatt	caccatctgt	tattgacagg	ctgctttctg	tgatctacac	tgtgatgcct	840
ccagtattta	accctgtaac	ctacagcctg	cggacaacatg	acatgaaatg	tgctctgata	900
aggttgctgc	agaaaacata	tggtcaggag	gcttacttc			939

<210> 608

<211> 972

<212> DNA

<213> Unknown (H38g457 nucleotide)

<220>

<223> Synthetic construct

<400> 608

atggctgtag	gaaggaacaa	cacaattgtg	acaaaattca	ttctcctggg	actttcagac	60
catcctcaaa	tgaagatttt	ccttttcatg	ttatttctgg	ggctctacct	cctgacgttg	120
gcctggaact	taagcctcat	tgccctcatt	aagatggact	ctcacctgca	catgccccatg	180
tacttcttcc	tcagtaacct	gtccttccctg	gacatctgct	atgtgtcctc	caccgccccct	240
aagatgctgt	ctgacatcat	cacagagcag	aaaaccattt	cctttgttgg	ctgtgccact	300
cagtactttg	tcttctgtgg	gatggggctg	actgaatgct	ttctcctggc	agctatggcc	360
tatgaccggg	atgctgcaat	ctgcaacccc	ttgctttaca	cagtcctcat	atcccataca	420
ctttgtttaa	agatgggtgg	tggcgccat	gtgggtggat	tccttagttc	tttcattgaa	480
acatactctg	tctatcagca	tgatttctgt	gggcccata	tgatcaacca	ctttttctgt	540
gacctccctc	cagtcctggc	tctgtcctgc	tctgatacct	tcaccagcga	ggtggtgacc	600
ttcatagtea	gtgttgctgt	tggaaatag	tctgtgctag	tggtcctcat	ctcttatggg	660
tacattgttg	ctgctgttgt	gaagatcagc	tcagctacag	gtaggacaaa	ggccttcagc	720
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ttggtgatcc	ccgtgggtgaa	tcccatcatc	tacagtttta	ggaataagga	gattaaaaat	900
gccatgagga	aagccatgga	aagggacccc	gggatttctc	acggtggacc	attcattttt	960
atgaccttgg	gc					972

<210> 609

<211> 942

<212> DNA

<213> Unknown (H38g458 nucleotide)

<220>

<223> Synthetic construct

<400> 609

atgaccaatc	agacacagat	gatggaattc	ttgcttgtga	gatttactga	gaattgggtg	60
ctcctgaggg	tgcatgcttt	gctcttctca	ctgatctacc	tcacggctgt	gctgatgaat	120
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gccctactaa	agctcacttg	ttctaaagaa	catgccatca	ttagtgtcag	tgtggccatt	600
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tctgtctgtg	taaggatata	acagagacag	agacaatcca	aagccttttc	caactgtgtg	720
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gggtctgatg	caccttctat	tctagacttg	ctgggtgtctg	tgttctatct	tgtcgcacct	840
ccaaccttga	accctgttat	ctactgtctg	aagaacaagg	acattaaatc	cgctctgagt	900

aaagtcctgt ggaatgtag aagcagtggg gtaaatgaaaa ga

942

<210> 610

<211> 921

<212> DNA

<213> Unknown (H38g459 nucleotide)

<220>

<223> Synthetic construct

<400> 610

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caggaatta	tcttcctctt	ttttctcatt	gtctatcttg	tggtttttct	cggcaacatg	120
ctcatcatca	ttgcaaaat	ctataacaac	accttgcata	cgcccatgta	tgttttcctt	180
ctgacactgg	ctgttggtga	catcatctgc	acaacaagca	tcataccgaa	gatgctgggg	240
accatgctaa	catcagaaaa	taccatttca	tatgcaggct	gcatgtccca	gctcttcttg	300
ttcacatggt	ctctgggagc	tgagatgggt	ctcttcacca	ccatggccta	tgaccgctat	360
gtggccattt	gtttccctct	tcattacagt	actgttatga	accaccatat	gtgtgtagcc	420
ttgctcagca	tggtcatggc	tattgcagtc	accaattcct	gggtgcacac	agctcttctc	480
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ttgctggcct	tgctctgtag	ccctgtaaga	atcaatgagg	tgatgggtga	tggtgtgat	600
attaccctgg	ccatagggga	ctttattctt	acctgcatct	cctatgggtt	tatcattggt	660
gctattctcc	gtatccgcac	agtagaaggc	aagaggaagg	ccttctcaac	atgctcatct	720
catctcacag	tggtgacctt	ttactattct	cctgtaatct	acacctatat	ccgccctgct	780
tccagctata	catttgaaag	agacaagggt	gtagctgcac	tctatactct	tgtgactccc	840
acattaaacc	cgatgggtga	cagcttccag	aataggggaga	tgccaggcagg	aattaggaag	900
gtgtttgcat	ttctgaaaca	c				921

<210> 611

<211> 810

<212> DNA

<213> Unknown (H38g460 nucleotide)

<220>

<223> Synthetic construct

<400> 611

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gaaaaagagc	tgagctcat	cctctttcca	gtcttcctgg	tgatctacct	tgtgaccctg	120
atttggaaca	tggtcttat	catcctcacc	agaatagact	ctcatctgaa	cacacccatg	180
tacttttttc	tcagtttctt	ctcatttaca	gacatctgct	attcttctac	catcagccca	240
aggatgcttt	cagacttctt	aaaagataag	aagacaattt	ccttccttgc	ctgtgccact	300
cagtattttc	ttggggcctg	gatgagtctg	gctgagtgtc	gcctcttggt	catcatggcc	360
tgtgacagat	atgtggccat	tggcagcccc	ctgcagtact	cagcaatcat	ggtcacctagt	420
atctgtttga	agatggtagc	tggagtctgt	gggggtggat	tccttagtag	cttagttcat	480
acagtccctt	gctttaatct	ctactactgt	gggccaaata	tcattcaaca	tttcttctgt	540
aacacacttc	agattatttc	cttgtcttgc	tccaaccctt	ttatcagcca	aatgattctt	600
tttctggaag	ctatttttgt	tgggttgggc	tctttgcttg	ttatcctttt	gtcttatggg	660
ttcattgtag	cttcataact	gaaaatatca	tcaaccaa	gttggtgcaa	ggccttcaat	720
acctgtgcct	cccacctggc	agctgtggct	ctcttctatg	gcacagccct	ttctgtgtac	780
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<210> 612

<211> 988

<212> DNA

<213> Unknown (H38g461 nucleotide)

<220>

<223> Synthetic construct

<400> 612

tactccaaag	aaattataga	ataatgtact	tccaatgata	ttataaaatg	tggttagcat	60
aataagatta	ctttttttac	tgtttatcct	tttagagttc	acagaagatt	tggttggtaca	120
gcaagtgtct	tttttcatct	ttctcatcat	ttatgtcatc	agcctctcag	gcaacatcat	180
tctgaattct	ctcatctgtg	ctgattcttg	gccctacaca	cccatgtatt	tcttcactgg	240
aaaccgggtc	cttctggatc	tctgggtatc	ctctgtccac	atccccgata	tcttctctgc	300
ttgcatttct	gatgacaaaa	ccatctcctt	tcttggctgc	cttgctcagt	tcttctctgc	360
tgtgttggcc	taaaatgagt	gctatatgat	ggcttccatg	gcttatgacc	gctacatggc	420
aatctccaag	cccctgcttt	attcccgggc	cacattccca	gagttatgtg	ccagtcttgt	480
tgaggcttca	caccttggcg	gctttgtaaa	ctcaaccatc	atcaccagtg	agacacctac	540
cttgagcttc	tgtggcagca	atatcattga	tgatttcttc	tgtgatctgc	ccccacttgt	600
aaagtgtgtg	tgtgatgtga	aggagcgcta	ccaggctgtg	ctgcatttta	tgcttgccctc	660
caatcatcac	tcccactgca	cttattcttg	cgctccatctc	ttcatcattg	cagccatctc	720
gaagatccgt	tccattaagg	gccgcctcca	ggtcttctcc	acttgtgggt	ctccccgtgac	780
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tgcttataaa	atggataaat	tggggtcagt	gttctatact	gtgggtgattc	caatgctaaa	900
ccccttgatc	tatagcttaa	gaaataagga	tgtcaaatag	gccttgaaga	aaatgttaga	960
tagacttcag	tttcttaaag	aaaaatat				988

<210> 613

<211> 1049

<212> DNA

<213> Unknown (H38g462 nucleotide)

<220>

<223> Synthetic construct

<400> 613

atggagcaga	gcaattattc	cgtgtatgcc	gactttatcc	ttctggggtt	gttcagcaac	60
gcccgtttcc	cctggcttct	ttgccctcat	tctcctggtc	tttgtgacct	ccatagccag	120
caacgtgggtc	aagatcattc	tcattccacat	agactcccgc	ctccacaccc	ccatgtactt	180
cctgtctcagc	cagctctccc	tcaggggacat	cttgtatatt	tccaccattg	tgcccaaaat	240
gctggtcgac	caggatgatga	gccagagagc	catttccttt	gcaggatgca	ctgcccacaa	300
cttctcttac	ttgaccttag	caggggctga	gttcttcttc	ctaggactca	tgtcctgtga	360
tcgctacgta	gccatctgca	accctctgca	ctatcctgac	ctcatgagcc	gcaagatctg	420
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ctgctgtatt	atgatgtctc	tcattcccttt	ctctgtgatc	tcgggctctt	acacaagaat	660
tctcattact	gttttatagga	tgagcgaggc	agaggggagg	cgaaaggctg	tgggccacctg	720
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acagaagggt	gttgggagggt	gtgtgtcctc	aggaaaggta	accactttct	aaacaaattg	960
catatgctgc	tagagacttg	aaatgaagga	tacaagactt	tatcattgcc	cttgagttta	1020
aatattctct	gcctggaaac	aagtgaccc				1049

<210> 614

<211> 957

<212> DNA

<213> Unknown (H38g463 nucleotide)

<220>

<223> Synthetic construct

<400> 614

atgggtgttc	acaatttggt	cacgggtgact	cagtttatcc	ttatagggtc	ctcttacttc	60
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cgaagtggag	acattctctt	ggccattggg	actgtgatta	agttgcacac	tactcatgta	180
ttattttttg	gcaaatgtgt	ccatcttaga	catattgtgt	tcattcagcta	ctatacctaa	240
gatgcctaa	attctcttag	ctgaggatca	cagcatttct	tttgttaggt	gagctttgca	300
gccctatttc	ctagtggcct	gggctgggaa	gaaagcttcc	tcactgttac	ggcttatgac	360

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tgggtgtgtgg tcacatgttt ctccctttgt tacatcctga tcatgaacaa attggctctg      420
tccagctggg ttatgggacc tgagcagctg ggtttctaaa ttctctctc ctccacgtag      480
tgtctaccct ctgcctgtct ttctgcaagc ctgatcgagt taaccagtat tactgtgata      540
tctcaccgat gggggccctg ttgtgccagt ccatgcacct ggcaaacatg cttgttttag      600
tgggaatcagt tatcttgggg atcagtgtct ttctggctgc ctttaacttt tacatataca      660
tcactctccac tatcctaaag atccagtgtg tagagtggag tgcaaagtgc ttctctacat      720
gcacttccca cctccttacg gtctgtttgt tctatggcat attgacattt acctacattt      780
actccttctc cagtcaacac tcacatgtct aaggcaagcc cagatctagc cacagacagg      840
ctcatctcta tgctatacag agttattacc ctgatgttta acttcatcac tgacaacctg      900
agaaacacag aggtaaaagg agcctcagaa aggttttatg tcattgaaca tgtttat      957

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<210> 615

<211> 840

<212> DNA

<213> Unknown (H38g464 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(840)

<223> n = A,T,C or G

<400> 615

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atgtacctga ccacgggtgct ggggaacctg ctcatcatgc tgctcatcca gctggactct      60
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tcactctgtca ctgtccctaa gatgctgatg gacatgcgga ctaagtacaa atcgatcctc      180
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gccagctccc tctctcacac cttctcctg acccggtctg cttctgtgc tgcgaacacc      420
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atccacaaag cattgtccac atgtggtccc catctctctg tgggtgtctct ctattatggg      660
tcaatatatt gccagtacct ttcccagat gtaagcagtt ctattgacaa ggatgtcatt      720
gtggctctca tgtacacggt ggtcacaccc atgttgaacc ctttatcta cngcattnng      780
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<210> 616

<211> 909

<212> DNA

<213> Unknown (H38g465 nucleotide)

<220>

<223> Synthetic construct

<400> 616

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cagggctttg ttctgatggg catatcagac catccccagc tggagatgat cttttttata      120
gccatcctct tctcctatct gctgacccta cttgggaact caaccatcat cttgctttcc      180
cgcctggagg ccggtctcca tacacccatg tacttcttcc tcagcaacct ctctccttg      240
gaccttgctt tgcctactag ttcagtcctc caaatgctga tcaatttatg gggaccaggc      300
aagaccatca gctatgggtg ctgcataacc cagctctatg tcttctcttg gctgggggcc      360
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gggcaccgga ggggtggagg attcctctgc gaggtgcctg ccatgatcaa actggcctgt      600
ggcgacacaa gtctcaacca ggctgtgtct aatgggtgtc gcaccttctt cactgcagtc      660
ccactaagca tcactgtgat ctctactgc ctcatgtctc aggcagtgct gaaaatccgc      720
tctgcagagg ggaggcgaaa ggcgttcaat acgtgcctct cccatctgct ggtgggtgtc      780

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ctctttctatg gctcagccag ctatgggtat ctgcttccgg ccaagaacag caaacaggac	840
cagggcaagt tcatttccct gttctactcg ttgggtcacac ccatgggtgaa tcccctcatc	900
tacacgctg	909

<210> 617

<211> 926

<212> DNA

<213> Unknown (H38g466 nucleotide)

<220>

<223> Synthetic construct

<400> 617

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agtagcaccc tcacgtgtt gatctgtaat gactcccacc tacacacacc catgtatttt	180
gtcattggaa atctgtcatt tctggatctc tgggtattctt ctgtctacac cccaaagatc	240
ctagtgcact gcatctctga agacaaaagc atctcctttg ctggctgcct gtgtcagttc	300
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tacgtggcca tctccaagcc cctgctttat gctcagacca tgccaaggag attgtgcatc	420
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cccctcgtga agctggcatg cagtgtgaga gctaccaggc tgtgctgcac ttccttctgg	600
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ccatcctgag gatccactct acccagggcc gcatcaaagt cttctccaca tgcctctccc	720
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ccagctactc cctcaagagg gacaaaatgg tttctacctt ttatactatg ctgttcccca	840
tggtgaatcc catgatctac agtctgagga ataaagacat gaaagacgct ctgaaaaaat	900
tcttcaagtc agcataatcc aaagtc	926

<210> 618

<211> 936

<212> DNA

<213> Unknown (H38g467 nucleotide)

<220>

<223> Synthetic construct

<400> 618

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ccccagctgg agatgatctt ttttatagcc atcctcttct cctatttgct gaccctactt	120
gggaactcaa ccatcatctt gctttccgcg ctggaggccc ggctccatac acccatgtac	180
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ggtgtctgca ccttcttcac tgcagtccca ctaagcatca tctgtatctc ctactgcctc	660
attgctcagg cagtgtgaa aatccactct gcagagggga ggcgaaaggc gttcaatacg	720
tgctctctcc atctgtctggg ggtgttctc ttctatggct cagccagcta tgggtatctg	780
cttccggcca agaagagcaa acaggaccag ggcaagttca tttccctgtt ctactcgttg	840
gtcacacca tggatgaatcc cctcatctac acgctgcgga acatggaagt gaagggcgca	900
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<210> 619

<211> 247

<212> DNA

<213> Unknown (H38g468 nucleotide)

<220>

<223> Synthetic construct

<400> 619

ggtgagaggc ttaagacact caacacatgt gtgtcacata tctatgcagt gctgatcttc	60
tatgtgccta tggtagtggt gtccatgggt catcgatttg ggaggcatgc tcctgaatat	120
gtgcacaagt tcatgtctct ttgtacctcc aatgctctac ccaattatct attccatcaa	180
gactaaggag attcgcagga gactacacaa gatgttattg ggagctaagt tctgatcaag	240
gaaaact	247

<210> 620

<211> 936

<212> DNA

<213> Unknown (H38g469 nucleotide)

<220>

<223> Synthetic construct

<400> 620

atggaagtgg gaaattgcac catcctgact gaattcatct tgttgggttt ctcagcagat	60
tcccagtggc agccgattct atttggagtg tttctgatgc tctatttgat aaccttgtea	120
ggaaacatga ccttgggtat cttaatccga actgattccc acttgcatac acctatgtac	180
tttttcattg gcaatctgtc ttttttggat ttctgggtata cctctgtgta tcccccaaaa	240
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gcaccacat tggtaaaaat gtcctgtaca aacaccaggg tctacgaaaa agtcctgctt	600
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tgtgcttccc acctcatctc agtcatgctc ttctatggat cattgttggt tatgtattca	780
aggcctagtt ccacctactc cctagagagg gacaaagtag ctgctctggt ctacaccgtg	840
atcaaccacac tgctcaaccc tctcatctat agcctgagaa acaaagatat caaagaggcc	900
ttcaggaaaag caacacagac tataacaacca caaaca	936

<210> 621

<211> 954

<212> DNA

<213> Unknown (H38g470 nucleotide)

<220>

<223> Synthetic construct

<400> 621

atgcctactg taaaccacag tggcactagc cacacagtct tccacttgct gggcatccct	60
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cttcttggga acagcctgct catcttcatt atcctcacaa agcgcagcct ccatgaacce	180
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gcctttgacc actatattgc catatgctac ccactgaggt acaccacat tcttacaat	420
gctctgatca agaaaatttg tgtgactgtc tctctgagaa gttatggtac aattttccct	480
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tgtgaacaca ttggcctagc caaatatgca tgtaatgaca ttcgaataaa catttggtat	600
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aacacatttg gctcccatgt ctgcatcacc atcctctttt atgggtctgg catcttcaca	780
atccttacc agaggtttgg acgccacatt ccaccttgta tccacatccc gttggcataat	840
gtctgcattc tggctccacc tatgctgaat ccctatttt atgggatcaa aaccaagcaa	900
atccaggaac aggtggttca gtttttgttt ataaaacaga aaataacttt gggt	954

<210> 622
 <211> 942
 <212> DNA
 <213> Unknown (H38g471 nucleotide)

<220>
 <223> Synthetic construct

<400> 622
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 tacttctctg tggcccacct gtcccttctg gacctctgtt tcgcctccgt cactgtgccc 240
 aagatgttgg ccaacttggt ggcccacatg cactccatct cgctggctgg ctgcctgacc 300
 caaatgtact tcttctttgc cctgggggta actgatatgt gtcttctggc ggccatggcc 360
 tatgactgct acgtggccat ccggcaccac cctccctatg ccacgaggat gtcccgggcc 420
 atgtgcgcag ccctgggtggg aatggcatgg ctgggtgtccc acgtccactc cctcctgtat 480
 atcctgctca tggctcgctt gtcttctgtt gcttccacc aagtgcacca cttcttctgt 540
 gaccaccagc ctctcttaag gctctcgtgc tctgacaccc accacatcca gctgctcatc 600
 ttcaccgagg gcgcgcaggt ggtggtcact cccttctctg tcatcctcgc ctctatggg 660
 gccatcgtag ctgcccgtgt ccagctgccc tcagcctctg ggaggctcgg ggtgtgtcc 720
 acctgtggct cccacctggc tgtggtgagc ctcttctatg ggacagtcac tgcagtctac 780
 ttccaggcca catcccagc cgaggcagag tggggccgtg tggccactgt catgtacact 840
 gtagtcaccc ccatgctgaa ccccatcatc tacagcctct ggaatcgaga tgtacagggg 900
 gcaactccag cccttctcat tgggcgaagg atctcagcta gt 942

<210> 623
 <211> 946
 <212> DNA
 <213> Unknown (H38g472 nucleotide)

<220>
 <223> Synthetic construct

<400> 623
 atctctatgt tctcctgcaa caccagcact tctggctcagt ctaccttctt cctcactggg 60
 ttccaggcc tgggaagcct tcattcattgg gtttccatcc ccatcaacct cttctgtgtg 120
 gtttccatcc tgggtaataa tatcctctc ttcctgatcc acacagatcc agccttacat 180
 gaacccatgt atatcttctt gtccatgttg gcagcctctg atctgggctt ctgtgcctct 240
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 tgtgcagcac agatgttctt catccatacc ttcacctatg tggagtccgg tgtactgctg 360
 gccatggcct tcgategctt tattgccatc cgggaccctc tgcattatgc cataatcatt 420
 acctgctcag tcacagccga ggtgggaact gccattcttg tgagggtgt tctgctcaac 480
 ctcccgggac ctatcctcct gcagcagctg ctctttccca agatcagcgc tctctgtcac 540
 tgctactgcc tgcactgtga ccttgtgggg ttggcctgct cagacaccca gatcaatagc 600
 ctgggttggc ttggttccat cctcttctca ctgtgccttg actccttctt catcatgctt 660
 tcatatgccc tgatcctatg aactgtgctg ggcattgcat cacctgggga gcggtcaag 720
 gcaactcaaca cgtgtgtctc acacctctgc attgttctca tcttttattt gccaaaacgg 780
 gctgtctgtc ttgcaccgag taaagaagca tgactaccct gctctggcag tgctcatggc 840
 caacctacac ttcttgggtc cacccttcat gaacccatt gtgtattgca tcaagtctag 900
 gcagatccgt cagagcctcc taaagcactt ccagcagaag aggatt 946

<210> 624
 <211> 960
 <212> DNA
 <213> Unknown (H38g473 nucleotide)

<220>
 <223> Synthetic construct

<400> 624

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gatccagaac	tgacgcccgt	cctcgctggg	ttgtcccggg	ccatgtatct	ggatcatggg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctcggc	catgggtccc	240
aagatgattg	tggacatgca	gtctcatagc	agagtcacat	cttatgcggg	ctgcctgaca	300
cggatgtctt	tcttggtcct	ttttgcatgt	atagaagaca	tgctcctgac	tgcatgggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcacatg	gaatcctcac	420
ctctctgtct	tcttagtttt	gggtgctctt	ttccttagcc	tggttgattc	ccagctgcac	480
agttagattg	tggtacaatt	caccttcttc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	agcttctcaa	ccttgccctg	tctgacagcg	tcataaatag	catattctta	600
tatttcgata	gtactatgtt	tggttttctt	cccatttcaa	ggatcctttt	gtcttactat	660
aaaattgtcc	cctctattct	aaggatttca	tcgtcagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttgtttgc	ttattttatg	gaacaggcat	tggtgtgtac	780
ctgacttcag	ctgtgtcacc	acccccagg	agtggtgtgg	tggtgtcagt	gatgtacgct	840
gtggtcacc	ccatgctgaa	ccctttcatc	tatagcctga	gaaacagaga	cattcaaagc	900
gccctctgga	ggctgcgcag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 625

<211> 985

<212> DNA

<213> Unknown (H38g474 nucleotide)

<220>

<223> Synthetic construct

<400> 625

atgaaactca	taaaccatac	catcagaacc	caacctcctt	tctgtctcatg	ggaattccag	60
gcccggaggc	atcccacttt	tggattgctt	ttcccttctg	ctccatgtat	gccctggcag	120
tgctgggaaa	catggtgggtg	ctgctagtgg	tacattcaga	gcctgtattg	caccagccca	180
tgtacctgtt	cctctgcatg	ctatccacca	ttgacctggg	cctctgcacc	tccactgtgc	240
ccaagctcct	tgcaacttttt	tgggcaaagg	atgctgagat	caactttggg	gcctgtgctg	300
cccagatgtt	ctttatccat	ggcttctcag	ctgtagaatc	tggtatactg	ctagcaatgg	360
cctttgaccg	ctacttagcc	atttgctggc	ctctgcacta	tgggtcattg	ctctccccag	420
agtctgtagg	caagctgggg	gctgcagcgt	gcttcgtggg	ttgggactca	tgaccccaact	480
caactgtcta	ctggcaagac	tgagctactg	cagtcgagtg	gtggcccact	cctactgtga	540
acacatggct	tggttaaagc	tggcttggg	aggaacacag	ccaaacaaca	tctatggcat	600
cactgtgcc	acactgggtg	tgggcactga	ctccatctgt	attgctgtct	cctatgcaact	660
catcctccga	gctgtgttag	gtcttttctc	caaggaggca	agggctaaga	cctttggcac	720
ttgtggctcc	caactgggtg	tcatacttct	cttctacaca	ccaggactct	tctccttcta	780
cacacagcgg	tttggccagc	acgtgcccgc	gcacatccac	atccttctag	ctgacctcta	840
cctggttgtg	ccacccatgc	tcaaccccat	catctatggc	atgaagacca	aacagatctg	900
ggatggggcc	ctcgggttc	tgaagtgggg	ccctgctcag	tcataaagtc	ttcaacccca	960
ccctgaaacc	tttatcttct	ttgcc				985

<210> 626

<211> 989

<212> DNA

<213> Unknown (H38g475 nucleotide)

<220>

<223> Synthetic construct

<400> 626

cacacagagc	cacggcatct	cacaggtgtg	tgagaattcc	tcctcgtggg	actctcagag	60
gatccagaac	tgacgcctgt	cctcggtggg	gtgtcccctgt	ccatgtatgg	ggcacagtg	120
ataaggaaac	tgctcatcat	cctgggtgtg	agctctgact	cccacctcca	cacccccatg	180
tttttttctt	ctccaacgtg	tggtgggctg	acatcagttt	cacgtcggcc	ggggttccca	240
agatgacggg	ggacatgcag	tcgcatagca	gagtcactta	ttatgcgggc	tgcatggcat	300
ggatgtcttt	tttctgctct	ttagcatgta	tagaagacat	gctcgtgtgt	gtgatggcat	360
aggagtgtct	tgtagccatg	tgctgccctg	tgcaatacac	agttattgta	aatcctcacc	420

tgtgtgtttt	cagagttggg	gtgtcctttc	tccagagcgt	gttgatttcc	caggtgcaca	480
gatagagtgt	gtcacaattc	acttttttca	agaatgtgga	aatctctcat	tttgtgtgtg	540
agccatctca	atctctccac	tttgctgtgt	gtgacagttt	catcaagagc	atattcatgt	600
atttcgatag	taatatgttt	ggttttcttc	ccatcacagg	gatctttttg	tcttaatata	660
aaagtgtccc	ctccattata	aggatttcat	cgtcagatgg	aaagtataaa	gctttctcca	720
cgtgtggctc	tcacgtggca	gttgtttgct	tattatatgg	aacaggcatt	ggggtgtaca	780
tgacttcagg	tgtggcacca	ccccccagca	atgggtgtgt	ggcatcagtg	aagtacgcgg	840
tggtcacccc	catgctgacc	cctttcatct	acagcgtgag	aaacagggac	attcaaagcc	900
ccctgtggag	tgtgtgcagc	agcacagtta	aatcttttga	tgtgtcccat	cttttttgtg	960
tgtgggtaag	aaagggcacc	cacattaaa				989

<210> 627

<211> 512

<212> DNA

<213> Unknown (H38g476 nucleotide)

<220>

<223> Synthetic construct

<400> 627

cacacacagc	cacgggggtct	cacacgtgtg	tgagaattcc	tcctcctggg	actctcacag	60
gatccacaac	tgcagctgtg	ctctctgggc	tgccctgtg	catgtgtctg	ggcacacagc	120
tggggaacct	gctgcatcat	cctgggtgtg	agctctgact	cccacctcca	cacccccatg	180
tactcttttc	tctccaacct	gtgctggggc	tgacatcagt	ttcacctcca	ccacggggcc	240
caagttgatt	gtggacatcc	actcttacac	cagagacatc	tcctatgcac	gctgtctgac	300
tcacacacct	ctctttgcca	tttttgagg	cgtgggaaag	agacatgctc	ctgagagtga	360
tgggctatga	ccgcgttgta	gacatctgtg	accctctata	tcattcacac	gccatgaacc	420
cctgtgtctg	tggctctcta	gatttgtgtg	ctcttttttt	tctcacactt	ttatacacc	480
acctgcacaa	ctcgattgcc	ttacacatga	cc			512

<210> 628

<211> 967

<212> DNA

<213> Unknown (H38g477 nucleotide)

<220>

<223> Synthetic construct

<400> 628

atgaatgaga	caaatcatte	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagttca	60
agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	ccaacctgtc	atcttatagc	gtatgtgttg	cctcttctgc	taccctaaa	240
atgattgcag	actttctggt	tgagcacaag	actatttctt	ttgatgcccg	cctggcccag	300
atcttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgtgtgtc	tcttctctcat	ttcctgggtt	gtgggcttca	tcataccac	cagccagttg	480
gcattcactg	ttaatctgcc	atcttgttgt	cctaataagg	tagatagttt	tttctgtga	540
ccttctctta	gtgaccaagt	tagcctgcat	agacacttat	gtgtgcagcc	tactaatagt	600
tgcatagagt	ggctttcttt	ctctgagttc	ctttctcttc	ttgggtgtct	cctacactgt	660
aatacttgtt	acagtttaga	atagctcttc	tgtaagcatg	gtgaaggcct	gctccacatt	720
gactgctcac	atcactgtgg	tcactttatt	ctttggaccg	tgtattttca	tctatgtgtg	780
gcccttcagc	agttactcag	ttgacaaagt	ccttgctgta	ttctacacca	tcttcacgtc	840
tattttaaac	cctgtaatct	acatgctaag	aaacaaagaa	gtgaaggcag	ctatgtcaaa	900
actgaagagt	cggtatcaga	agcttgggtc	ggtttctgta	gtcataagaa	acgttctttt	960
cctagaa						967

<210> 629

<211> 942

<212> DNA

<213> Unknown (H38g478 nucleotide)

<220>

<223> Synthetic construct

<400> 629

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cctgaactcc	agatattctt	ttttgtgggt	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttact	cactgtccta	tccacctcac	accttcactc	tcgcacgtac	180
ttcctgctca	gcaacctgtc	tcattgacat	gtgcctgtcc	tcctttgccca	caccaaagat	240
gattatggac	ttttttgtct	tgcgtaagac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ctgatctcca	tgtcttttga	360
caggatatatt	gccatatgta	aacctctccg	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttcctttgg	tcattccagt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagtg	gtgtgactgc	tcttacaagt	tttctgcttt	tgtctacctc	ctacatcatt	660
gttcttaata	ctatcagggg	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcacatt	ttattgttgt	gttaatgttc	tttgggccct	gtattttcat	ttatgtgtgg	780
ccttcacaaa	acttctgtgt	agacaaaatt	ctctctgttt	tctataccat	cttcactccc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgctc	cg		942

<210> 630

<211> 595

<212> DNA

<213> Unknown (H38g479 nucleotide)

<220>

<223> Synthetic construct

<400> 630

atgaacccgt	gtttgtgtgg	cttttagagtt	gtgggtgtctt	ttttttttca	cagtctttta	60
ggcgcacagg	tgcacaactt	gagcgctca	caaatacagt	gtttcgagta	tgtggaaatt	120
cataatttct	tgtgtgccct	ttctcaactc	ccccatcggt	catgggtgtga	cactttcccc	180
aataacataa	tcgtgtattt	tcctgtctgc	atatttggtt	ttcttcccat	cgcggggacc	240
ccttttctct	taatatgaaa	gtgtttcctc	cattgagagg	gtttcatcat	aaggtggaga	300
gtataaggct	ttccccacgt	gtgggtctca	cctctcagtc	gtttgctgat	tatatggcac	360
aggcggttga	gggcacctca	gttcagatgt	gtcatcttcc	ccgagaaagt	ctgcggtggc	420
ctcagtgatg	tacactgtgg	tcacccccat	gctgaaccct	ttcatctaca	gcatgagaaa	480
cagggatact	aaaagtgtcc	tgcggcggtc	gcacggcagc	acggtgtaat	tttgatatct	540
tcttatctgt	cccatctcct	ttgtagtgtg	ggttaaaaaa	ggcagaaagg	tcaaaa	595

<210> 631

<211> 942

<212> DNA

<213> Unknown (H38g480 nucleotide)

<220>

<223> Synthetic construct

<400> 631

atgctgggtc	tcaatggcac	cccttccag	ccagcaacac	tccagctgac	aggcattcct	60
gggatacaaa	caggcctcac	ctgggttgcc	ctgattttct	gcacctctca	catgatctcc	120
attgtaggta	acctcagcat	tctcactctg	gtgttttggg	agcctgtctc	gcacagccc	180
atgtactact	tcctctctat	gtcgcgtctc	aatgatctgg	gagtgtcctt	ttctacactt	240
cccactgtga	tttctacttt	ctgcttcaac	tacaaccatg	ttgcgtttaa	tgtttgcttg	300
gtccagatgt	tcttcatcca	cactttctcc	ttcatggagt	caggcatact	gctggccatg	360
agcttggatc	gctttgtggc	tatttgttat	ccattacgct	atgtcactgt	gctcactcac	420
aaccgtatat	tggctatggg	tctgggcata	cttaccagaa	gtttcaccac	tctcttccct	480
ttcccttttg	tggtgaaacg	actgcccttc	tgcacaggca	atgttttgca	tactccttac	540
tgtctccatc	cagatctcat	gaaagtagca	tgtggagaca	tccatgttaa	caacatttat	600

gggctcttgg	tgatcatttt	tacctatggt	atggactcaa	ctttcatcct	gctttcctac	660
gcattgatcc	tgagagccat	gctgggtcatc	atatcccagg	aacagcggct	caaggcactc	720
aacacctgca	tgtcacacat	ctgtgcagtg	ctggcctttt	atgtgcccc	aattgctgtc	780
tccatgattc	accgcttctg	gaaaagtgtc	ccacctgttg	ttcatgtcat	gatgtccaat	840
gtctacctgt	ttgtaccacc	catgctcaac	cctatcatct	acagtgtgaa	aaccaaggag	900
atccgcaaag	ggattctcaa	gttcttccat	aaatcccagg	cc		942

<210> 632

<211> 936

<212> DNA

<213> Unknown (H38g481 nucleotide)

<220>

<223> Synthetic construct

<400> 632

atgggggtgt	tcaatgtcac	tcaccctgca	ttcttctctc	tgactgggtat	ccctgggtctg	60
gagagctctc	actcctggct	gtcaggggccc	ctctgcgtga	tgtatgctgt	ggcccttggg	120
ggaaatacag	tgatcctgca	ggctgtgcga	gtggagccca	gcctccatga	gccccatgtac	180
tacttctctg	ccatgttctc	cttcagtgtg	gtggccatata	ccatggccac	actgcccact	240
gtactccgaa	ccttctgcct	caatgcccgc	aacatcactt	ttgatgcctg	tctaattcag	300
atgtttctta	ttcacttctt	ctccatgatg	gaatcaggta	ttctgctggc	catgagtttt	360
gaccgctatg	tggccatttg	tgacccttg	cgctatgcaa	ctgtgctcac	cactgaagtc	420
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caccagaca	tgatgaggct	tgccgtgtgt	gatatacagta	tcaacagcat	ctatggactc	600
tttgttcttg	tatccacctt	tggcatggac	ctgtttttta	tcttctcttc	ctatgtgtct	660
attctgcgtt	ctgtcatggc	cactgcttcc	cgtgaggaac	gcctcaaagc	tctcaacaca	720
tgtgtgtcac	atatcctggc	tgtacttgca	ttttatgtgc	caatgattgg	ggctctccaca	780
gtgcaccgct	ttgggaagca	tgtcccatgc	tacatacatg	tccatcatgtc	aaatgtgtac	840
ctatttgtgc	ctcctgtgct	caaccctctc	atttatagcg	ccaagacaaa	ggaaatccgc	900
cgagccattt	tccgcatgtt	tcaccacatc	aaaata			936

<210> 633

<211> 467

<212> DNA

<213> Unknown (H38g482 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(467)

<223> n = A,T,C or G

<400> 633

atggaaagca	atcagacctg	gatcacagaa	gtcatcctgt	tgggattcca	ggtggaccca	60
gctctggagt	tgttcctctt	tgggtttttc	ttgctattct	acagcttaac	cctgatggga	120
aatgggatta	tcctggggct	catctacttg	gactctagac	tgcacacacc	catgtatgtc	180
ttcctgtcac	acctggccat	tgtggacatg	tcctatgcct	cgagtactgt	ccctaagatg	240
ctagcaaate	ttgtgatgca	caaaaaagtc	atctcctttg	ctccttgcct	acttcagact	300
tttttgtatt	tggcgtttgc	tattacagag	tgtctgattt	tgggtgatgat	gtgctatgat	360
cggtatgtgg	caatctgtca	cccccttgca	atacaccnt	cattatgaac	tggagagtgt	420
gcactgtcct	ggcctcaact	tgttggtat	ttagctttct	cttggct		467

<210> 634

<211> 988

<212> DNA

<213> Unknown (H38g483 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(988)

<223> n = A,T,C or G

<400> 634

atggaatgca accagacatg gatcacagac atcaccctgc tgggattcca ggttggtcca	60
gcactggcga ttctcatctn gtgaactctt ctctgtcttc tatacactca ccctgctggg	120
gaatgggggc atctttggga ttatctgcct ggactctaag cttcacacac ccattgtactt	180
cttcctctca cacctggcca tcattgacat gtcctatgct tccaacaatg ttccaagat	240
gttggaaca ctaatgaacc agaaaagaac catctccttt gttccatgca taatgcagac	300
ttttttgtat ttggcttttg ctgttacaga gtgcctgatt ttggtggtga tgcctatga	360
taggtatgtg gccatctgcc accctttcca gtacactgtc atcatgagct ggagagtgtg	420
cacgactctg gttctcacgt cctgggtcatg tgggtttgcc ctgtccctgg tacatgaaat	480
tctccttcta aggttgccct tctgtgggcc cgggagatgt aaccacctct tctgtgaaat	540
tctatctgtc ctcaagctgg cctgtgctga cacctgggtt aaccaagtgg tcatatttgc	600
tacctgtgtg tttgtcttag tcgggacctt ttccttgatt ctggtctcct acatgcacat	660
cctcggggcc atcctgaaga tccagacaaa ggaggccgc ataaaggcct tctccacctg	720
ctcctcccac ctgtgtgtgg ttggactatt ctttggcata gccatggtgg tttacatggt	780
cccagactct aatcaacgag aggagcagga gaaaatgctg tccctgtttc acagtgtctt	840
gaacccaatg ctgaaccccc tgatctacag cctgaggaat gctcagttga agggcgccct	900
ccacagagca ctccagagga agaggtccat gagaacggtg tatgggcttt gcctttaaaa	960
catgtggttt gctgaagcaa gaattttg	988

<210> 635

<211> 941

<212> DNA

<213> Unknown (H38g484 nucleotide)

<220>

<223> Synthetic construct

<400> 635

atgggagtc accaatcatg gtcaccagaa ttcattcctgg tggaaatccca gctcagtgcc	60
gagatggaag tgctcctctt ttagatcttc tccctgttat acatcttcag cctgctggca	120
aatggcatga tcttgggact catctgtctg gaccacattc tgectacccc catgtacttc	180
ttcctctcac acctggccat cattgacatg tccatagctt ccaacaatgt tccaagatg	240
ttggcaaatc tgatgaacaa gaaaagaacc atctcctttc ttccatgcat aatgcagacc	300
tattttgtatt tctcttttgc tgctacagag tgtctgattt tgggtggtgat gtcctatgat	360
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tcccagactc taatcaacga gaggagcagg agaaaatgct gtccctgttt cacagtgtct	840
tgaacccaat tctgaacccc ctgatctaca gtctgaggaa tgctcagggt aaggcgcccc	900
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<210> 636

<211> 1002

<212> DNA

<213> Unknown (H38g485 nucleotide)

<220>

<223> Synthetic construct

<400> 636

atgtgttate tttctcagct atgcctcagc cttgggggaac acactttaca tatggggatg	60
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cctcagttac	agaagggttct	atattgtgctc	atattgattc	tgtattttact	aactattttg	180
gggaataacca	ccatcattct	ggtttctcgt	ctggaaccca	agcttcata	gccgatgtat	240
ttcttctctt	ctcatctctc	cttctgttac	cgctgcttca	ccagcagtg	tattccccag	300
ctcctggtaa	acctgtggga	acccatgaaa	actatcgctc	atgggtggctg	tttgggtcac	360
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gaccgctatg	tggtgtgtctg	ccgtcctctc	cattacactg	tcttaatgca	tatccatctc	480
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cagccagcca	agagtagatc	cagggaccag	ggcaagtttg	tttctctctt	ctacactgtg	900
gtaacccgca	tgcttaaccc	tcttatttat	accttgagga	tcaaggaggt	gaaaggggca	960
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<210> 637

<211> 510

<212> DNA

<213> Unknown (H38g486 nucleotide)

<220>

<223> Synthetic construct

<400> 637

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gcactggaga	ttctcctctg	tggacttttc	tctgccttct	atacactcac	cctgctgggg	120
aatgggggtca	tccttgggat	tatctgctg	gactgtaagc	ttcacacacc	catgtacttc	180
ttcctctcac	acctggccat	tgttgacata	tcctatgctt	ccaactatgt	ccccaaagatg	240
ctgacgaatc	ttatgaacca	ggaaagcacc	atctcctttt	ttccatgcat	aatgcagaca	300
ttcttgtatt	tggcttttgc	tcacgtagag	tgtctgattt	tgggtgggtgat	gtcctatgat	360
cgctatgcgg	acatctgcc	ccccttacgt	tacaatatcc	tcattgagctg	gagagtgtgc	420
actgtcctgg	ctgtggcttc	ctgggtgttc	agcttcctcc	tggctctgggt	cccgttttagt	480
tctcagtcgc	tgaggtgcat	gaacgtactg				510

<210> 638

<211> 924

<212> DNA

<213> Unknown (H38g487 nucleotide)

<220>

<223> Synthetic construct

<400> 638

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ggtaatgtgg	ctatcttgat	gttgggtgagc	acctcccatc	agttgcatac	ccccatgtac	180
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atgtactttg	ttttctcatt	aggctgcaca	gagtacttcc	tcctggcagc	catggcttat	360
gaccgtgtgc	ttgccatctg	ctatccttta	cactacggag	ccatcatgag	tagcctgtctc	420
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attgcaccct	ggattgccct	ggcctgcacc	aacacacagg	cagtagagct	tgtggccttt	600
gtgattgtctg	ttgtggttat	cctgagttca	tgcctcatca	cctttgtctc	ctatgtgtac	660
atcatcagca	ccatcctcag	gateccctct	gccagtggcc	ggagcaaagc	cttctccacg	720
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cgcacctcta	tcaaagatgc	cttggatctg	atcaaagctg	tccacgtcct	gaacactgtg	840
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ctgctgaaga	aatggaaggg	aaaa				924

<210> 639
 <211> 669
 <212> DNA
 <213> Unknown (H38g488 nucleotide)

<220>
 <223> Synthetic construct

<400> 639
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 atctgtctgg accacagtct gcacactctc atacttcttc ctctcacacc tggccgtcat 180
 tgacatggcc tatgtctcca acaatgttcc caagatgctg gtggatcttg caaactagaa 240
 aagcaccatg tgcttttttc catgcataat gcagacattc ttgtatttgg cttttgctca 300
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 cttacgttac aatgtcctca tgagctggag agagtgcact gtcctggctg tggcttctcg 420
 ggtgttcagc ttctcctcgg ctctgggtcca tttagtctc attctgaggc tgccttcag 480
 tggggtcagc aaatcaacca ctactgtgaa atcctgtctg tctcaagtt ggcctgtgct 540
 gacacctggc tcaaccaggt ggtcatcttt gcaagctgca tgttcaccc ggtagggatga 600
 ctctgcctgg tgctgggtctc ttacttgggc atctggcggc atctgagatc agttgcgaag 660
 ccaaaaagg 669

<210> 640
 <211> 927
 <212> DNA
 <213> Unknown (H38g489 nucleotide)

<220>
 <223> Synthetic construct

<400> 640
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 cctcgtctgg aggtgttct ctttgtattt gtccttttct tctacctcct gacccttgtg 120
 ggaaacttca ccataatcat catctcatat ctggatcccc ctcttcatac cccaatgtac 180
 ttttttctca gcaacctctc ttactggac atctgcttca ctactagcct tgctcctcag 240
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 ctctatatct ctctggcact gggtccact gaatgtatcc tcttggctga catggccttg 360
 gatcggtaca ttgctgtctg caaacccctc cactatgtag tcatcatgaa cccacggctt 420
 tgccaacagc tggcatctat ctctggctc agtgggttgg ctagtccct aatccatgca 480
 acttttacct tgcaattgcc tctctgtggc aaccataggc tggaccattt tatttgcgaa 540
 gtaccagctc ttctcaagtt ggcttgtgtg gacaccactg tcaatgaatt ggtgcttttt 600
 gttgttagtg ttctgtttgt tgctattcca ccagcactca tctccatctc ctatggcttc 660
 ataactcaag ctgtgctgag gatcaaatca gtagaggcaa ggcacaaagc cttcagcacc 720
 tgctcctccc accttacagt ggtgattata ttctatggca ccataatcta cgtgtacctg 780
 caacctagtg acagctatgc ccaggaccaa gggaagtta tctccctctt ctacaccatg 840
 gtgaccccca ctttaaatcc tatcatctat actttaagga acaaggatat gaaagaggct 900
 ctgaggaaac ttctctcggg aaaattg 927

<210> 641
 <211> 1012
 <212> DNA
 <213> Unknown (H38g490 nucleotide)

<220>
 <223> Synthetic construct

<400> 641
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 tggggaacct gctcatcctc ctggccatca gccctgactc ccacctccac atccccatg 180

acttcttctct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcatttc	ctatgcaggc	tgcttgactc	300
agatgtctct	ctttgcccatt	tttgaggcca	tggaagagag	acatgctcct	gagtgtgatg	360
gcctatgacc	ggttttagtc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gcttcctagt	tttgttgtct	ttttttttct	gtcctcagtc	ttttagactc	480
ccagctgcac	aacttgattg	ccttacaagt	gacctgcttc	aaggatgtgg	aaattcctaa	540
tttcttctgt	gacctttctc	aactccccc	tcttgcatgt	tgtgacacct	tcaccaataa	600
gataatcatg	tatttccctg	ctgccatatt	tggttttctt	cccatctcag	ggaccctttt	660
ctcttactct	aaaattgttt	cctccattct	gagggtttca	tcatacaggtg	ggaagtataa	720
agccttctcc	acctgtgggt	ctcacctgtc	agttgtttgc	tgagtttatg	gaacaggcgt	780
tgagggttac	ctcagttcag	atgatgtgtc	atcttccccc	agaaagggtg	cagtggcctc	840
agtgatgtac	acgggtggta	cccccatgcc	gaaccccttc	atctacagcc	tgagaaaacag	900
ggatattaaa	agtgtcctgc	ggcgggcgca	cggcagcaca	gtctaattctc	aatatcttct	960
tatctgttcc	attccttttg	tagtgtgggt	taaaaaaggc	agaaagggtca	aa	1012

<210> 642

<211> 879

<212> DNA

<213> Unknown (H38g491 nucleotide)

<220>

<223> Synthetic construct

<400> 642

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ctccaaaccc	caatgtattt	ctttttgaga	aacttgtctt	tcttagattt	ttgttacatc	180
tctgtcacaa	ttccaaaatc	tattgttagt	tccttgactc	atgatacttc	catttctttc	240
tttgggtgtg	ctctgcaagc	cttctttttc	atggacttgg	caactacgga	ggtagccatc	300
cttacagtga	tgtcctatga	ccgctatatg	gccatctgcc	ggcctttaca	ttatgaggtc	360
attataaac	aagggtgtctg	tctgaggatg	atggccatgt	cgtggctcag	tgggggtgatc	420
tgtggattca	tgcatgtgat	agcaacattc	tcattaccat	tctgtgggcg	caatagaata	480
cgtcaatttt	tctgtaatat	tccacagctc	ctaagcctct	tagaccccaa	agtaattacc	540
attgagattg	gagtcatggt	ttttgggtaca	agtcttgtga	taatctcctt	tgttgtaatt	600
actctctcct	acatgtacat	tttttctgtc	atcatgagga	ttccttctaa	ggagggtaga	660
tcaaaaacat	tttctacctg	cattccacat	cttgtggttg	taacactctt	tatgatattc	720
ggcagcattg	cctatgtgaa	gccaatttca	aattctcccc	cgtttctgga	tgttttctctg	780
tctgcgttct	acacagtcgt	gcccccgacc	ctgaaccccg	tcatactatag	tctgaggaat	840
agggacatga	aggcagccct	gagaaggcag	tgtgggtccc			879

<210> 643

<211> 1020

<212> DNA

<213> Unknown (H38g492 nucleotide)

<220>

<223> Synthetic construct

<400> 643

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tcttccccc	caagtgtggt	cttcttctta	gacaatttgt	cattttcatt	atgagtgtaa	120
cagaaaatac	gctcatgac	ctcctcattc	gcagtgactc	ccgactccac	actccaatgt	180
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aaatgggtcac	taactttctg	tcaggcagca	gaactatttc	atttgcagg	tgtgggttcc	300
aggtatttct	gtccctcacc	ctcctgggtg	gtgagtgcct	tctcctgggt	gcaatgtcct	360
gtgatcgcta	tgtggctatc	tgtcaccgc	tgcgctatcc	gattcttatg	aaggagtatg	420
ccagcgtct	catggctgga	ggctcctggc	tcattggggt	tttcaactcc	acagtccaca	480
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cttgttcctt	ccacatgatt	gtggtcacga	tgtactatgg	gccatttatt	tttacaatata	780
tgagacctaa	atcatattac	actccaggcc	aggataagtt	cctggcaata	ttctatacga	840
tcctcacacc	cacactcaac	cctttcatct	acagctttag	gaataaagat	gttctggcgg	900
tgatgaaaaa	tatgctcaaa	agtaactttc	tgcacaaaaa	aatgaatagg	aaaattcctg	960
aatgtgtgtt	ctgtctattt	ctatgtttaaa	tgcttgaagg	atactcatga	gaggtttcct	1020

<210> 644

<211> 932

<212> DNA

<213> Unknown (H38g493 nucleotide)

<220>

<223> Synthetic construct

<400> 644

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gggaacgccc	tcctcatagg	gctgaacgtg	ctgcaccctc	gcctgcacaa	ccccatgtac	180
ttctcagcaa	cctctccctc	atggacatct	gcggcacctc	ctcctttgtg	cctctcatgc	240
tagacaattt	cctggaaacc	cagaggacca	tttccttccc	tggtgtgtgc	ctgcagatgt	300
acctgaccct	ggcgctggga	tcaacggagt	gcctgtgtgt	ggctgtgatg	gcataatgacc	360
gttatgtggc	tatctgccag	ccgcttaggt	acccagagct	catgagtggg	cagacctgca	420
tgcagatggc	agcgctgagc	tgggggacag	gctttgccaa	ctcactgcta	cagtccatcc	480
ttgtctggca	cctccccttc	tgtggccacg	tcatcaacta	cttctatgag	atcttggcag	540
tgctaaaact	ggcctgtggg	gacatctccc	tcaatgcgct	ggcattaatg	gtggccacag	600
ccgtcctgac	actggccccc	ctcttgtctc	tctgcctgtc	ttaccttttc	atcctgtctg	660
ccatccttag	ggtaccctct	gctgcaggcc	ggtgcaaaag	cttctccacc	tgctcagccc	720
accgcacagt	ggtggtggtt	ttttatggga	caatctcctt	catgtacttc	aaacccaagg	780
ccaaggatcc	caacgtggat	aagactgtcg	cattgttcta	cgggggtgtg	acgccctcgc	840
tgaaccccat	catttacagc	ctgaggaatg	cagaggtgaa	agctgccgtc	ctaactctgc	900
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<210> 645

<211> 957

<212> DNA

<213> Unknown (H38g494 nucleotide)

<220>

<223> Synthetic construct

<400> 645

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cgaccctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcatcatcat	tctggctctc	catacagatg	tgacacctca	cacacctatg	180
tacttctttc	ttgccaaact	ccccttctct	gacatgagct	tcaccacgag	cattgtccca	240
cagctcctgg	ctaaactctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtgggc	300
cagttctata	tctcccattg	gctggggggca	accgagtgtg	tcctgtctggc	caccatgtcc	360
tatgaccgct	acgttgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcatccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggtc	tgaccaccag	catggtgggc	480
tccacgctca	ccatgctcct	accgctgtgt	gggaacaatt	gcatcgacca	cttcttttgc	540
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cacattgccc	gggcccgtgt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tgtggtgtct	ctgtttttacg	ggagcatcat	cttcatgtat	780
ctccagccag	ccaagagcac	ctcccatgag	caggggcaagt	tcatagtctc	gttctacacc	840
gtagtcactc	ctgcgctgaa	cccacttatt	tacaccctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatggtatt	agagaactgc	tgtggctctg	caggcaagct	ggcgcaa	957

<210> 646

<211> 792

<212> DNA

<213> Unknown (H38g495 nucleotide)

<220>

<223> Synthetic construct

<400> 646

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attcaactggg	accaccgggt	ccacacgccc	atgtacttcc	tcctgagcca	actttccctc	120
atggacgtga	tgtcggtttc	caccactgtg	cccaaaatgg	cggctgacta	cttgaccgga	180
agtaaggcca	tctcccgccg	tggtgtgggt	gcgagatct	tcttctctcc	cacactgggt	240
ggtggagagt	gcttctctct	agcagccatg	gcctatgacc	gctatgcggc	tgtctgccac	300
ccactccgat	atccactct	catgagctgg	cagctgtgcc	tgaggatgaa	cctgtcgtgt	360
tggtcctctg	gtgcagctga	cgggtcctg	caggctgttg	ctaccctgag	cttcccatat	420
tgcggtgcac	acgagatcga	tcaattcttc	tgcgagaccc	ccgtgctggt	gcgtttggct	480
tgtgtctgaca	cttcagtctt	cgaaaacgcc	atgtacatct	gctgtgtgtt	aatgtcctctg	540
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cgctctacag	aagccgcaa	gaaggccttt	gccacctgct	cttcacatgt	ggctgtgggtg	660
ggactctttt	atggagctgc	cattttttacc	tatatgagac	ccaaatccca	caggtccact	720
aaccacgaca	aggttgtgtc	agccttctat	actatgttca	cccctttact	aaacccctc	780
atctacagtg	tg					792

<210> 647

<211> 662

<212> DNA

<213> Unknown (H38g496 nucleotide)

<220>

<223> Synthetic construct

<400> 647

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atgatgctgg	gtccaccga	gtgcgtctc	ctggttgtca	tgtcccatga	ccgctatgtg	180
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gtgactgtgg	cctgggtgctg	tggttctcta	aactccttca	tcatgtgtcc	tcagacgatg	300
cagctctccc	ggtgtggacg	tcgcagggtg	gaccacttcc	tgtgtgagat	gcctgtctct	360
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ggtgctgagg	atgaagtcag	cagcaggggc	aaagaaagcc	ttccacacct	gctcttctca	540
cctcacagtg	gtctctctct	tctacggaac	catcatctac	ggtgtacctg	aagccggcca	600
acagctactc	ccaagatcag	gggaagttcc	tgactctctt	ctacaccatc	gtcattccca	660
gc						662

<210> 648

<211> 936

<212> DNA

<213> Unknown (H38g497 nucleotide)

<220>

<223> Synthetic construct

<400> 648

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ccagccctgg	agcatctgct	cttccctctg	tgtctagcca	tgtacctggt	gaccctcctg	120
gggaacacag	ccatcatggc	ggtgagcgtg	ctagatatcc	acctgcacac	gcccgtgtac	180
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atgctgggtcc	acctcctgtc	atccccggaag	accatctcct	ttgctgtctg	tgccatccag	300
atgtgtctga	gcctgtccac	gggtccacg	gagtgccctg	tactggccat	cacggcctat	360
gaccgtacc	tgccatctg	ccagccactc	aggtaccacg	tgtcatgag	ccaccggctc	420
tgcgtgctgc	tgaggggagc	tgctgctcc	tcaagtcggt	gactgagatg		480
gtcatctcca	tgaggctgcc	cttctgtggc	caccacgtgg	tcagtcactt	cacctgcaag	540

atcctggcag	tgctgaagct	ggcatgcggc	aacacgtcgg	tcagcgaaga	cttcctgctg	600
gcgggtccca	tctgtctgct	gcctgtaccc	ctggcattca	tctgcctgtc	ctacttgctc	660
atcctggcca	ccatcctgag	ggtgccctcg	gccgccaggt	gctgcaaagc	cttctccacc	720
tgcttggcac	acctggctgt	agtgtgtgctt	ttctacggca	ccatcatctt	catgtacttg	780
aagcccaaga	gtaaggaagc	ccacatctct	gatgaggtct	tcacagtcct	ctatgccatg	840
gtcacgacca	tgctgaaccc	caccatctac	agcctgagga	acaaggaggt	gaaggaggcc	900
gccaggaagg	tgtggggcag	gagtcggggc	tccagg			936

<210> 649

<211> 940

<212> DNA

<213> Unknown (H38g498 nucleotide)

<220>

<223> Synthetic construct

<400> 649

atggaaaggg	gaaattggac	attggtgact	gagtttatcc	ttgtggggat	accaaccacc	60
agagcccttg	ggggcctcct	ctttgtgatt	ttttatcagc	ctatttggtg	acagtccttg	120
gaaacaccct	tattattatc	ctgattcttg	tggattacag	gctccactca	cccatgtatt	180
tcttcctcag	caatctctct	ttcagtgaag	cattaaccat	aacctgtgct	gttcctaaga	240
tgctggaggg	cttcccgtcg	gaaaggaaga	gcatcacaa	tggcgaatgc	tctgcacagt	300
cctatttcta	ttttctttcc	ggatgcactg	agtttatcc	ttttgctgtc	atgtcctatg	360
accgctatgt	ggccatttgc	agtcctcttc	agtaccctgc	aattatgacc	agtcactctc	420
gtgcccacct	cgtcatectc	tcctgggtgg	gtggctttct	cctcatgctc	ccatccacca	480
tcctcaaggg	aggactgcca	cactgtgggtc	ccaacgtgat	tgagcacttt	ttctgtgaca	540
gcgcccctct	cctccacctg	gcctgtgctg	acattcgtgc	tattgagctg	ttggactttc	600
tcagctcact	ggtcctgata	ctcagctccc	tctcactcac	agtgggtctcc	tatgtttaca	660
tcactctccac	cattctgaag	ataccctcag	gccaagggtca	acgcaaagcc	tttgccacct	720
gtgcctctca	cttcacgggtg	gtctccgtgg	gctatgggat	ctccatcttt	gtctatgttc	780
acccctcaca	gaagagcagc	ctgcacctca	acaagatcct	ctttatcctc	tccagcatca	840
tcacaccctc	cctgaatccc	ttcgtcttca	gtctgtggaa	tgaacccatg	aaagatgcac	900
tgaaggacgc	ctcggccgga	ggacagagct	tgctcaaagg			940

<210> 650

<211> 927

<212> DNA

<213> Unknown (H38g499 nucleotide)

<220>

<223> Synthetic construct

<400> 650

atggcaaatc	tcacaatcgt	gactgaattt	atccttatgg	ggttttctac	caataaaaaat	60
atgtgcattt	tgcattcgat	tctcttcttg	ttgatttatt	tgtgtgccct	gatggggaat	120
gtcctcatta	tcatgatcac	aactttggac	catcatctcc	acacccccgt	gtatttcttc	180
ttgaagaatc	tatctttctt	ggatctctgc	cttatttcag	tcacggctcc	caaactctatc	240
gccaatctct	tgatacacaa	caactccatt	tcattccttg	gctgtgtttc	ccaggctctt	300
ttgttgcttt	cttcagcate	tgcagagctg	ctcctcctca	cgggtgatgtc	ctttgaccgc	360
tatactgcta	tatgtcaccc	tctgcactat	gatgtcatca	tggacaggag	cacctgtgtc	420
caaagagcca	ctgtgtcttg	gctgtatggg	ggctctgattg	ctgtgatgca	cacagctggc	480
accttctcct	tatctacttg	tgggtccaac	atgggtccatc	agttcttctg	tgacattccc	540
cagttattag	ctatttcttg	ctcagaaaat	ttaataagag	aaattgcact	catccttatt	600
aatgtagttt	tggatttctg	ctgttttatt	gtcatcatca	ttacctatgt	ccacgtcttc	660
tctacagtca	agaagatccc	ttccacagaa	ggccagtcac	aagcctactc	tatttgccct	720
ccacacttgc	tggttggtgt	atctctttcc	actggattca	ttgcttatct	gaagccagct	780
tcagagtctc	cttctatttt	ggatgctgta	atctctgtgt	tctacactat	gctgccccca	840
acctttaatc	ccattatata	cagtttgaga	aacaaggcca	taaagggtggc	tctgggggatg	900
ttgataaagg	gaaagctcac	caaaaag				927

<210> 651

<211> 942
 <212> DNA
 <213> Unknown (H38g500 nucleotide)

<220>
 <223> Synthetic construct

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<400> 651
atgggggatg tgaatcagtc ggtggcctca gacttcattc tgggggcct cttcagtcac      60
tcaggatcac gccagctcct cttctccctg gtggctgtca tgtttgcac aggccttctg      120
ggcaacaccg ttcttctctt cttgatccgt gtggactccc ggctccacac acccatgtac      180
ttcctgctca gccagctctc cctgtttgac attggctgtc ccatggtcac catccccaag      240
atggcatcag actttctgcg gggagaaggt gccacctcct atggagggtg tgcagctcaa      300
atattcttcc tcacactgat ggggtgtggt gaggggcgtcc tgttggtcct catgtcttat      360
gaccgttatg ttgctgtgtg ccagccccctg cagtatcctg tacttatgag acgccaggta      420
tgtctgctga tgatgggctc ctctgggtg gtagggtgtc tcaacgcctc catccagacc      480
tccatcaccc tgcattttcc ctactgtgcc tcccgtattg tggatcactt cttctgtgag      540
gtgccagccc tactgaagct ctctgtgca gatacctgtg cctacgagat ggcgtgtcc      600
acctcagggg tgctgaccc aatgctccct ctttccctca tcgccacctc ctacggccac      660
gtgttgccag ctgttctaag catgcgtcga gaggaggcca gacacaaggc tgccaccacc      720
tgctcctcgc acatcacggg agtggggctc ttttatgggt ccgccgtgtt catgtacatg      780
gtgccttgcg cctaccacag tccacagcag gataacgtgg ttccctctt ctatagcctt      840
gtcaccccta cactcaaccc ccttatctac agtctgagga atccggaggt gtggatggct      900
ttggtcaaag tgcttagcag agctggactc aggcaaatgt gc      942
  
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<210> 652
 <211> 936
 <212> DNA
 <213> Unknown (H38g501 nucleotide)

<220>
 <223> Synthetic construct

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<400> 652
atggatctta aaaatggatc tctagtgacc gagtttattt tactaggatt ttttggacga      60
tgggaacttc aaattttctt ctttgtgaca ttttccctga tctacggtgc tactgtgatg      120
ggaaacattc tcattatggt cacagtgaca tgtagggtcaa cccttcattc tcccttgtac      180
tttctccttg gaaatctctc ttttttggac atgtgtctct ccactgccac aacacccaag      240
atgatcatag atttgtctac tgaccacaag accatctctg tgtggggctg cgtgaccag      300
atgtttctca tgcacttctt tgggggtgct gagatgactc ttctgataat catggccttt      360
gacaggatag tagccatatg taaaccctcg cactatagga caatcatgag ccacaagctg      420
ctaaaggggt ttgcgatact ttcattggata attggttttt tacactccat aagccagata      480
gttttaacaa tgaacttgcc tttctgtggc cacaatgtca taaacaacat attttgtgat      540
cttccccttg tgatcaagct tgcttgcat gaaacataca ccctggaatt atttgtcatt      600
gctgacagcg ggctgctctc tttcacctgt ttcacctct tgcctgtttc ttacattgtc      660
atcctgggtc gtgtacacaa aaaatcatca catgggctct ccaaggcgt gtccacattg      720
tctgccaca tcattgtggt cactctgttc tttggacctt gtatttttat ctatgtttgg      780
ccattcagta gtttggcaag caataaaact cttgccgtat tttatacagt tatcacacc      840
ttactgaatc cgagtattta taccctgaga aataagaaaa tgcaagaggc cataagaaaa      900
ttacggttcc aatatgttag ttctgcacag aatttc      936
  
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<210> 653
 <211> 972
 <212> DNA
 <213> Unknown (H38g502 nucleotide)

<220>
 <223> Synthetic construct

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<400> 653
atgccacag acaaacaaat ggaaaaacaa aatcagtcga tgggtgcctga atttattttg      60
  
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ttgggattca	aaaatctcat	gagctacaga	ttttctttat	cttatttttc	cattctctac	120
atatccataa	ttaagtaacc	taatcattat	ctttgtagtg	aaactggatc	ctcaattgca	180
ttctcccatg	tacttcctac	tggccaacct	gtcatctact	gatatgcccc	tggcctcctt	240
tgctactcct	aagaaaatcg	ataatgtaat	tagtgaatat	aggaccatct	cctatgaagg	300
ctgcatgaca	tagagatttt	tccttcactt	tttaagtggg	agtgagatgg	ttttactctt	360
agccatggca	atcgatagat	aatttgccat	atgcaaacc	ctccattaca	agtccattgc	420
atcggacttg	ctcctcgctc	ctggactatg	gatttcatgc	acaccatgag	ccaaattggt	480
ctcacagtga	ctttgccatt	ctgtggtctc	agtgtgtg	atatttttgt	gtgtgtgtga	540
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cagacagtgg	actactttct	ttgctgtgtt	tcattgtttct	gttaatctcc	tatagcaccg	660
tcttgattat	tatttgacat	cattcctcca	gggggtcttc	caaaactctg	tccacgcttt	720
cagcccatat	tatggtggtg	gtactgttct	ttggagcttg	catctttacc	tgtgaaagac	780
cattcagcac	tgtctccatt	gatgtctgtg	ttttaacta	tttttgctcc	ccttttaaat	840
ccaatcatct	acacattcag	gaataacgac	atgaagaaag	cattaagaaa	aatgaagatt	900
aactttgtga	gttctagatc	aacttgataa	ctaaaatatt	ataatcacta	aaagcatcat	960
cattattgtt	gt					972

<210> 654

<211> 936

<212> DNA

<213> Unknown (H38g503 nucleotide)

<220>

<223> Synthetic construct

<400> 654

atggatgaag	ccaatcactc	tgtggtctct	gagtttgtgt	tcttgggact	ctctgactcg	60
cggaagatcc	agctcctcct	cttcctcttt	ttctcagtgt	tctatgtgtc	aagcctgatg	120
ggaaatctcc	tcattgtgct	aactgtgacc	tctgaccctc	gtttacagtc	ccccatgtac	180
ttcctgctgg	ccaacctttc	catcatcaat	ttggtatttt	gttcctccac	agctcccaag	240
atgatttatg	accttttcag	gaagcacaag	accatctctt	ttgggggctg	tgtagttcag	300
atcttcttta	tccatgcagt	tgggggaact	gagatggtgc	tgctcatagc	catggctttt	360
gaccgatatg	tggccatag	taagcctctc	cactacctga	ccatcatgaa	cccacaaagg	420
tgcattttgt	ttttagtcac	ttcctggatt	ataggtatta	ttcactcagt	gattcagttg	480
gcttttgttg	tagacctgct	gttctgtggc	cctaataaat	tagatagttt	cttttgtgat	540
cttcctcgat	ttatcaaact	ggcttgcata	gagacctaca	cattgggatt	catggttact	600
gccaatagtg	gattttattc	tctggcttct	tttttaattc	tcataatctc	ttacatcttt	660
attttgggtga	ctgttcagaa	aaaatcttca	ggtggtatat	tcaaggcttt	ctctatgctg	720
tcagctcatg	tcattgtggt	ggttttgggtc	tttgggccat	taatcttttt	ctatattttt	780
ccatttccca	catcacatct	tgataaatte	cttgccatct	ttgatgcagt	tatcactccc	840
gttttgaatc	cagtcactta	tactttttaga	aataaagaga	tgatggtggc	aatgagaaga	900
cgatgctctc	agtttgtgaa	ttacagtaaa	atctttt			936

<210> 655

<211> 967

<212> DNA

<213> Unknown (H38g504 nucleotide)

<220>

<223> Synthetic construct

<400> 655

atgaataggg	acaaccagtc	tgtggtgtct	gaattcgtgt	tgctgggact	ctcaaattct	60
tgggagactc	aagatttttc	ttttttgctt	ttcttgtctt	ttctatgtgt	ccggtgtgat	120
ggcaaaccctc	attgtagtgg	tcattgtaac	ctctgaccct	tacttgactc	cctccttgta	180
tattttgctg	gccaacctct	ctgtcattga	tctcacattt	tgctccattg	cagcacgcaa	240
gatgatttgg	gatattttca	ggaaacagaa	agtcatttcc	ttttggggct	gtgtagctca	300
gatcttcttt	agccatgctg	ttgggggcac	tgagatggtg	ctgctcatag	ccatggcctt	360
tgacagatat	gttgccgtat	gtaagccctt	tcactacctg	accatcatgc	atccaagaat	420
gtgcattttg	attctagtgg	cttcctgggc	cattggtctc	attcactcat	tggtccaatt	480
gtcttttgta	gtaaaacttg	ccttctgtgg	ccctaattgt	ttggacagct	tttactgtga	540

catacctcag	ctcatcaaac	ttgcttgac	aaatacctat	aaactgcagt	tcattggttac	600
tgctaatagt	gggttcattt	ccttgagtgc	tttcttcttg	ctcatcctct	cttacatctt	660
cattctggcc	actcttcaga	aacactcctc	aggaggctca	tccaaggctg	tctctactct	720
gtcagctcat	attactgttg	tggttttatt	ctttgggtcca	ctgatttttt	tctatgtatg	780
gccctctcct	ccaacacatc	tgaataaatt	tctagccata	tttgatgcca	ttttcactcc	840
ttttctgaat	ccagtcattt	acacattcag	gaacagggaa	atgaagattg	caataaggag	900
agtgttcggt	caatttatgg	gttttagaaa	aactacttaa	gtggctttat	taaaacacag	960
aatttcc						967

<210> 656

<211> 873

<212> DNA

<213> Unknown (H38g505 nucleotide)

<220>

<223> Synthetic construct

<400> 656

atggttgggg	caaatcactc	cgtgggtgtca	gagtttgtgt	tcctgggact	caccaattcc	60
tgaggagatcc	gacttctcct	ccttggtgttc	tcctccatgt	tttaccatggc	cagtatgatg	120
ggaaactctc	tcattttgct	cactgtgact	tctgaccctc	acttgcactc	ccccatgtat	180
tttctgttag	ccaacctctc	cttcattgac	ctgggtgttt	cctctgtcac	ttctcccaaa	240
atgatttatg	acctgttcag	aaagcacgaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggcgggtgtg	gagatgggtgc	tgctcatagc	catggccttt	360
gacagatatg	tggccatatg	taagccctc	cagtacctga	ccattatgag	cccaagaatg	420
tgcatgttct	tcttagtggt	tgccctgggtg	accggcctta	tccactctgt	agttcaattg	480
gtttttgtag	taaacttgcc	cttctgtggt	cctaattgat	cggacagctt	ttactgtgac	540
cttctctggg	tcattcaaact	tgccctgcaca	gacagctacc	gactggagtt	catgggtaca	600
gccaacagtg	gattcatctc	tctgggctcc	ttcttcatac	tgatcatttc	ctatgtggtc	660
atcattctca	ctgttctgaa	acactcttca	gctgggttat	ccaaggctct	gtccaccctt	720
tcagctcacg	tcagtgtggt	agttttgttc	tttgggtcct	tgatttttgt	ctatacgtgg	780
ccatctccct	ccacacacct	ggataagttt	ctggccatct	ttgatgcagt	tctcactcct	840
gttttaaatc	ctatcatcta	cacattcagg	aat			873

<210> 657

<211> 936

<212> DNA

<213> Unknown (H38g506 nucleotide)

<220>

<223> Synthetic construct

<400> 657

atgaatggaa	tgaatcactc	tgtgggtatca	gaatttgtat	tcattgggact	caccaactca	60
cgggagattc	agcttctact	ttttgttttc	tctttgttgt	tctactttgc	gagcatgatg	120
ggaaaccttg	tcattgtatt	cactgtaacc	atggatgtct	atctgcactc	ccccatgtat	180
ttctctctgg	ctaacctctc	aatcattgat	atggcatttt	gctcaattac	agccccaaag	240
atgatttgtg	atattttcaa	gaagcacaaag	gccatctcct	ttcggggatg	tattactcag	300
atcttcttta	gccatgtctt	tggggggcact	gagatgggtgc	tgctcatagc	catggccttt	360
gacagataca	tggccatatg	ttaaacctctc	cactacctga	ccatcatgag	cccaagaatg	420
tgtctatact	ttttagccac	ttctctctatc	attggcctta	tccactcatt	ggtccaatta	480
gtttttgtgg	tagattttacc	tttttgtggt	cctaataatct	ttgacagttt	ttactgtgat	540
ctccctcggc	tcctcagact	tgccctgtacc	aacacccaag	aactggagtt	catgggtcact	600
gtcaatagtg	gactcatttc	tgtgggctcc	tttgtcttgc	tggttaatttc	ctacatcttc	660
attctgttca	ctgtttggaa	acattcttct	gggtggtctag	ccaaggccct	ctctaccctg	720
tcagctcatg	tcactgtggt	catcttggtc	tttgggccac	tgatgttttt	ctacacatgg	780
ccttctccca	catcacacct	ggataaatat	cttgcatttt	ttgatgcatt	tattactcct	840
tttctgaatc	cagttatcta	cacattcagg	aacaaagaca	tgaaagtggc	aatgaggaga	900
ctgtgcagtc	gtcttgcgca	ttttacaaag	attttg			936

<210> 658

<211> 980
 <212> DNA
 <213> Unknown (H38g507 nucleotide)

<220>
 <223> Synthetic construct

<400> 658
 atggagcaaa ggaaaaatgt gactgagttt gtccttgtgg ggctcactca gagccccag 60
 ggacagaaaa tattatttct tgtgttcttg ctcatctacg ttgtgacaat ggtaggcaac 120
 atattcattg ttgtgactgt ggtggtcagc ccaactttgg atgccccatg tacttcttcc 180
 ttggctactt atcatttatg gatgctgttc attctactac agttaccca aatatgatta 240
 tagacttact ctatgagaag aaaaccattt cgttccaagc ttgattaccc agatttttat 300
 aggacaccta tttgggggtg ctgagatttt actcettgtt gtcattggcct atgatggcta 360
 cgtgaccatc tgcaaacccc tgcattattt gaccatcatg aaccaacggg tgtgcattct 420
 actgctgctg ttggcctggg ctggagggtt cttgcatgct gtagttcaac ttctttttgt 480
 ttacaacctt cccttctgtg gcccacatgt cattgaccat ttcatctgtg acatgtaccc 540
 tttattaaaa cttgcctgca ctgacaccta tgttactggc ctactgtgg ttgccaatga 600
 tggggcaatc tgtgtggtca tctttatgtc cttactcttc tcctatgggg tcattctgca 660
 ctccctgaag aatcttagtc aggaaggagc gcacaaagcc ttatccacct gtggctccca 720
 tatcactgtg gtgactctct tctttgtccc ttgtattttc atgtatgtga gacctcctt 780
 gaccttacct attgataaat ccttgactgt gttttacact gttatcacac ctatgttgaa 840
 ccctctaata tatactttaa gaaatgcaga gatgaaaaat gctatgaaga agctctggac 900
 tagaaaaaga aaatgagggt gcagacaaat gtatcatcta ttttcagtga agagttgctc 960
 cctccaggaa agccatttgt 980

<210> 659
 <211> 917
 <212> DNA
 <213> Unknown (H38g508 nucleotide)

<220>
 <223> Synthetic construct

<400> 659
 atgaatctta aaaatggatc tctagtgacc gagtttattt tactaggatt ttttggacga 60
 tgggaacttc aaattttctt ctttgtgaca ttttccctga tctacggtgc tactgtggtg 120
 ggaaacattc tcattatggt cacagtgaca tgtagtctga cccttcattc tccctgtgac 180
 tttctccttg gaaatctctc ttttttggac atgtgtctct ccaactgccac aacacccaag 240
 atgatcacia gaccatctct gtgtggggct gcgtgaccca gaagtctctc atgcattctt 300
 ttgggagtgc tgagatgact cttctgataa tcatggcctt tgacaggatg gtagccatat 360
 gtaaaccctt gcactatagg acaatcatga gccacaagct gctaaagggg tttgcgatac 420
 tttcatggat aattgggttt ttacactcca taagccagat agttttaaca atgaacttgc 480
 ctttctgtgg ccacaatgtc ataaacaaca tattttgtga tcttccctt gtgatcaagc 540
 ttgcttgcat tgaaacatac accctggaat tatttgtcat tgctgacagc gggctgctct 600
 ctttcacctg tttcatctc tttgttgttt cttacattgt catcctggtc agtgtaccaa 660
 aaaaatcatc acatgggctc tccaaggcgc tgtccacatt gctgcccac atcattgtgg 720
 tcaactctgt ctttggacct tgtattttta tctatgtttg gccattcagt agtttggcaa 780
 gcaataaaac tcttgcgtga ttttatacag ttatcacacc gttactgaat ccgagtattt 840
 ataccctgag aaataagaaa atgcaagagg ccataagaaa attacggttc caatatgtta 900
 gttctgcaca gaatttc 917

<210> 660
 <211> 1008
 <212> DNA
 <213> Unknown (H38g509 nucleotide)

<220>
 <223> Synthetic construct

<400> 660

tctacagacc	cacagaatct	aacagatgtc	tctatatccc	tcctcctaga	acctcagagg	60
atccagaatg	acagccgggc	ctcgctgggc	tggtcctgtc	catgtgcctg	gtcacgggtgc	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acatcttctt	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgactgt	ggacatccag	tctcacagca	gagtcatctc	ctatgcaggc	tgcttgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggaagagag	acatgttcct	gagtgtgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctatatc	attcagccat	catgaaccgc	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttt	ctctcagtct	tttagacgtc	480
cagctgcgca	acttgattgc	cttacaaatg	acctgcttca	aggatgtgga	aattcctaata	540
ttcttctgtg	acccttctca	actcccccat	cttgcatgtt	gtgacacctt	caccaataaac	600
ataatcctgt	atttccctgc	tgccatattt	ggttttcttc	ccatcttggg	gacctttttc	660
tcttactata	aaatcgtttt	ctccattctg	agggtttcat	catctgggtg	gaagtataag	720
gccttctcca	cctgtgtgtc	tcacctgtca	gtggtttgct	gattttatgg	aacaggcggt	780
ggagggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	aggctgcagt	ggcctcagtg	840
atgtacacgg	tggtcacccc	catgctgaac	cccttcatct	acagcctgag	aaacagggat	900
attaaaagtg	tcctgcgggc	gccgcacagc	agcacggctc	aatcttgata	tcttcttata	960
gtttccattc	cttttgtagt	gtgggttaaa	aaaggcagca	aggtcaaaa		1008

<210> 661

<211> 957

<212> DNA

<213> Unknown (H38g510 nucleotide)

<220>

<223> Synthetic construct

<400> 661

atgatggaaa	tagccaatgt	gagttctcca	gaagtctttg	tcctcctggg	cttctccaca	60
cgaccctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcatcatcat	tctgggtctc	catacagatg	tgacacctca	cacacctatg	180
tacttctttc	ttgccaacct	ccccttctct	gacatgagct	tcaccacgag	cattgtccca	240
cagctcctgg	ctaacctctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtggtc	300
cagttctata	tctcccattg	gctgggggca	accgagtgtg	tcctgctggc	caccatgtcc	360
tatgaccgct	acgtcgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcacccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggc	tgaccaccag	catggtgggc	480
tcacagctca	ccatgtcctt	accgctgtgt	gggaacaatt	gcacgcacca	cttcttttgc	540
gagatgcccc	tcattatgca	actggcttgt	gtggatacca	gcctcaatga	gatggagatg	600
tacctggcca	gctttgtctt	tgttgtcctg	cctctggggc	tcactctggt	ctcttacggc	660
cacattgccc	gggcccgtgt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tgtggtgtct	ctgttttacg	ggagcatcat	cttcatgtat	780
ctccagccag	ccaagagcac	ctcccatgag	cagggcaagt	tcatagtctt	gttctacacc	840
gtagtcactc	ctgcgctgaa	cccacttatt	tacaccctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatggtatt	agagaactgc	tgtggctctg	caggcaagct	ggcgcaa	957

<210> 662

<211> 912

<212> DNA

<213> Unknown (H38g511 nucleotide)

<220>

<223> Synthetic construct

<400> 662

atggaaagag	caaaccattc	agtgggtatcg	gaatttatct	tggtgggact	ttccaaatct	60
caaaatcttc	agattttatt	cttcttgagg	ttctctgtgg	tcttcgtggg	gattgtgtta	120
ggaaacctgc	tcatcttggt	gactgtgacc	tttgattcgc	tccttcacac	accaatgtat	180
tttctgctta	gcaacctctc	ctgcattgat	atgatcctgg	cttcttttgc	tacctctaag	240
atgattgtag	atttctctcg	agaacgtaag	accatctcat	ggtgggggatg	ttattcccag	300
atgttcttta	tgacacctct	gggtgggagt	gagatgatgt	tgcttgtagc	catggcaata	360
gacaggtatg	ttgccatatt	caaacccttc	cattacatga	ccatcatgag	cccacgggtg	420
ctcactgggc	tactgttata	ctcctatgca	gttggatttg	tgactcatc	tagtcaaatg	480

gctttcatgt	tgactttgcc	cttctgtggt	cccaatggtta	tagacagctt	tttctgtgac	540
cttcccccttg	tgattaaact	tgccgtgcaag	gacacctaca	tcctacagct	cctgggtcatt	600
gctgacagtg	ggctcctgtc	actgggtctgc	ttcctcctct	tgcttgtctc	ctatggagtc	660
ataatattct	cagttaggta	ccgtgctgct	agtcgaccc	ctaaggcttt	ctccactctc	720
tcagctcaca	tcacagttgt	gactctgttc	tttgtccgt	gtgtctttat	ctacgtctgg	780
cccttcagca	gatactcggg	agataaaatt	cttctctgtg	tttacacaat	tttcacacct	840
ctcttaaatc	ctattattta	tacattaaga	aatcaagagg	taaaagcagc	cattaaaaaa	900
agactctgca	ta					912

<210> 663

<211> 963

<212> DNA

<213> Unknown (H38g512 nucleotide)

<220>

<223> Synthetic construct

<400> 663

atgggtcaatt	tgacttcaat	gagtggattc	cttcttatgg	ggttttctga	tgagcgtaag	60
cttcagattt	tacatgcatt	gggtatttctg	gtgacatacc	tgctggcctt	gacaggcaac	120
ctcctcatta	tcaccatcat	taccgtggac	cgctgtctcc	attcccccat	gtattacttt	180
ttaaagcacc	tctctcttct	ggacctctgc	ttcatctctg	tcacagtccc	ccagtccatt	240
gcaaattcac	ttatgggcaa	cggttacatt	tctcttgttc	agtgcattct	tcagggtttc	300
ttcttcatag	ctctggcctc	atcagaagtg	gccattctca	cagtgatgtc	ttatgacagg	360
tacgcagcaa	tctgtcaacc	acttcattat	gagactatta	tggatccccg	tgccctgtagg	420
catgcagtga	tagctgtgtg	gattgctggg	ggcctctctg	ggctcatgca	tgctgccatt	480
aacttctcca	tacctctctg	tggaagaga	gtcattcacc	aattcttctg	tgatgttctt	540
cagatgctga	aactagcctg	ttcttatgaa	ttcattaatg	agattgcact	ggctgcattc	600
acaacgtctg	cagcatttat	ctgtttgatc	tccattgtgc	tctcctacat	tcgcactctt	660
tctacagtgc	tgagaatccc	atcagctgag	ggccggacca	aggtcttctc	cacctgccta	720
ccacacctat	ttgtagccac	cttcttctt	tcagctgcag	gctttgagtt	tctcagactg	780
ccttctgatt	cctcatcgac	tgtggacctt	gtattctccg	tattctatac	tggtgatacct	840
ccaacactca	atccagtcac	ttatagctta	cggaaatgatt	ccatgaaggc	agcactgagg	900
aagatgctgt	caaaggaaga	gcttcctcag	agaaaaatgt	gcttaaaagc	catgttttaa	960
ctc						963

<210> 664

<211> 930

<212> DNA

<213> Unknown (H38g513 nucleotide)

<220>

<223> Synthetic construct

<400> 664

atggaccac	agaactattc	cttgggtgtca	gaatttgtgt	tgcatggact	ctgcacttca	60
cgacatcttc	aaaatttttt	ctttatat	ttctttgggg	tctatgtggc	cattatgctg	120
ggtaaccttc	tcatttttgg	caactgtaat	tctgatccct	gcctgcactc	ctccccatg	180
tacttctctg	tggggaaacct	agctttcctg	gacatgtggc	tgccctcatt	tgccactccc	240
aagatgatca	gggatttcc	tagtgatcaa	aaactcatct	cctttggagg	atgtatggct	300
caaactcttct	tcttgcaatt	tactgggtgg	gctgagatgg	tgctcctggg	ttccatggcc	360
tatgacagat	atgtggccat	atgcaaaccc	ttgcattaca	tgactttgat	gagttggcag	420
acttgcacat	ggctgggtgct	ggcttcatgg	gtcgttggat	ttgtgcactc	catcagtcac	480
gtggctttca	ctgtaaattt	gccttactgt	ggccccaatg	aggtagacag	cttcttctgt	540
gacctccctc	tggtgatcaa	acttgcctgc	atggacacct	atgtcttggg	tataattatg	600
atctcagaca	gtgggttggc	ttccttgagc	tgttttctgc	tcctcctgat	ctcctacacc	660
gtgatccctc	tcgctatcag	acagcgtgct	gccggtagca	catccaaagc	actctccact	720
tgctctgcac	atatcatggg	agtgacgctg	ttctttggcc	cttgcatttt	tgtttatgtg	780
cggcctttca	gtaggtttctc	tgtggacaag	ctgctgtctg	tgttttatac	catttttact	840
ccactcctga	acccatttat	ctacacattg	agaaatgagg	agatgaaagc	agctatgaag	900
aaactgcaaa	accgacgggt	gacttttcaa				930

<210> 665
 <211> 957
 <212> DNA
 <213> Unknown (H38g514 nucleotide)

<220>
 <223> Synthetic construct

<400> 665
 atggaagaa agaatcaaac agctataact gaattcatca tcttgggatt ctccaaccta 60
 aatgaattgc agtttttact attcaccatc ttctttctga cttatttctg tactttggga 120
 ggaaatata taattatctt gacgactgtg actgatccac acctgcatac acctatgtat 180
 tattttctag ggaacttggc ctttattgac atctgtctaca ccaccagcaa tgtcccccag 240
 atgatgggtgc acctcctctc aaagaaaaaa agcatttctt atgtgggggtg tgtgggttcaa 300
 ctttttgcatt ttgttttctt tgtaggatca gagtgtctcc tactggcagc aatggcatat 360
 gatcggtaca ttgcaatctg caatccttta aggtattcag ttattctgag caaggttcta 420
 tgcaatcaat tagcagcctc atgtctgggtc gctgggttcc ttaactcagt ggtgcataca 480
 gtgttgacat tctgctgcc cttctgtggc aacaatcaga ttaattactt cttctgtgac 540
 atccccctt tgcctgactt gtcttggga aacacttctg tcaatgagtt ggcactgcta 600
 tccactgggg tcttcattgg ttggactcct ttcttttgta tctactttc ctacatttgc 660
 ataacttcca ccatcttgag gatccagtc tcagagggaa gacgaaaagc cttttctaca 720
 tgtgcctccc acctggccat tgtctttctc ttttatggca gcgccatctt tacatatgta 780
 cggcccatct caacttactc attaaagaaa gataggttgg ttctagtggt gtacagtggt 840
 gttaccccca tgctaaacct tataatttac acattgagga ataaggacat caaagaagct 900
 gtcaaaacta tagggagcaa gtggcagcca ccaatttctt ctttggatag taaactc 957

<210> 666
 <211> 910
 <212> DNA
 <213> Unknown (H38g515 nucleotide)

<220>
 <223> Synthetic construct

<400> 666
 atgagagaat ttttcttgtc agggttctca cagacaccat ctattgaagc agggctatatt 60
 gtactatttc ttttcttcta tatgtccatt tgggttggca atgtcctcat catggtcaca 120
 gtagcatctg ataaatacct gaattcatca cccatgtatt tccttcttgg caacctctca 180
 tttctggacc tatgttattc aacagtaacg acccctaagc ttctggctga cttctttaat 240
 catgaaaaac tcatttccta tgaccaatgc attgtgcaac tcttcttctt gcattttgta 300
 ggggcagctg agatgttctt gctcacagtg atggcgtagc atcgctatgt tgcaatctgt 360
 cgcccgctgc actacaccac tgtcatgagt cgggggttat gctgtgtgtt ggttgctgcc 420
 tcttggatgg gaggatttgt gcaactccact gtccagacca ttctcactgt ccatctaccc 480
 ttttgtgggc caaatcaggt ggaaaacttt tttttgtgat gttccccctg tcatcaaact 540
 tgcttgtgct gacacttttg tcattgaatt gctcatggta tctaacagtg ggttgatctc 600
 caccatctcc tttgtgggtg tgatttcctc ctacaccact atcctagtca agattcgctc 660
 caaggaagga aggcgaaagg cactctccac gtgtgcctct cacctcatgg tggtaacact 720
 gtttttttga ccctgtatct tcatctacgc tgcctcttcc tctacatttt ctgtggacaa 780
 gatgggtgct gtactctaca atgttattac cccaatgcta aacccccctc tctacacact 840
 tcggaacaaa gaggtaaagt cagccatgca gaagctctgg gtcagaaatg ggcttacttg 900
 gaaaaagcag

<210> 667
 <211> 945
 <212> DNA
 <213> Unknown (H38g516 nucleotide)

<220>
 <223> Synthetic construct

<400> 667

atggagaatg	tcactacaat	gaatgagttt	cttctacttg	gcctgactgg	tgttcaggag	60
ctgcagcctt	tcttcttttg	gattttctta	atcatttacc	tgataaactt	gattggaaat	120
ggatctatat	tggtagatgg	tgttttggaa	ccacaactcc	actccccctat	gtattttttt	180
ctgggaaacc	tttcttgtct	ggatatttct	tattcttcag	tgacactgcc	caagctgctc	240
gtaaacctcg	tgtgcagtcg	cagggtctata	tcttttctag	gctgtatcac	ccagctacac	300
ttcttccact	ttttgggaag	cacagaggcc	attttactgg	ctatcatggc	ctttgaccgt	360
tttgttgcc	tctgcaatcc	tcttcgctac	actgtcatca	tgaaccccc	ggtgtgtatt	420
ctgttggcag	ctgcggcctg	gctcatcagc	ttcttttacg	ctctgatgca	ttctgtcatg	480
actgcacacc	tgagtttttg	tggtctctcag	aaactcaatc	acttcttcta	cgatgtcaag	540
ccgctcttag	aattggcctg	tagtgacaca	ttactcaatc	aatggcttct	ttccattgtc	600
acaggcagca	tatccatggg	agctttcttt	ctgactcttc	tctcctgctt	ctatgtaatt	660
ggcttccttc	tgtttaagaa	cagggtcctgc	agaactctcc	acaaggctct	gtccacttgt	720
gcctcccatt	ttatgggtgg	atgtcttttc	tatggacctg	tgggcttcac	atatattcgt	780
cctgcttcag	ccacctccat	gattcaggac	cggataatgg	ccatcatgta	tagcgccgtc	840
accctgtac	tgaatccact	aatctacacc	cttaggaaca	aagaagtgat	gatggctctg	900
aagaaaatct	ttggtaggaa	gttgtttaaa	gactggcagc	aacac		945

<210> 668

<211> 966

<212> DNA

<213> Unknown (H38g517 nucleotide)

<220>

<223> Synthetic construct

<400> 668

atgaatgaga	caaatcattc	tcgggtgaca	gaatttgtgt	tgctgggact	gtctagttca	60
agggagctcc	aacctttctt	gtttcttaca	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttttgc	taccctaaa	240
atgattgcag	actttctggt	tgagcgcaag	actatttctt	ttgatgcctg	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctctc	cactacatga	cagtcatgag	ccgtcgtgta	420
tgtgttgtgc	tcgtccctcat	ttcatgggtt	gtgggcttca	tccatactac	cagccagttg	480
gcattcactg	ttaatctgcc	attttgtggt	cctaataagg	tagacagttt	tttctgtgac	540
cttctcttag	tgaccaagtt	agcctgcata	gacacttatg	ttgtcagctt	actaatagtt	600
gcagatagtg	gctttctttc	tctgagttcc	tttctcctct	tggttgtctc	ctacactgta	660
atacttggtta	cagttaggaa	tcgtccctct	gcaagcatgg	cgaaggcccg	ctccacattg	720
actgtccaca	tcactgtggg	cactttatct	tttgaccat	gcattttcat	ctatgtgtgg	780
cccttcagca	gttactcagt	tgacaaagtc	cttgctgtat	tctacaccat	cttcacgctt	840
attttaaacc	ctgtaatcta	cacgctaaga	aacaaagaag	tgaaggcagc	tatgtcaaaa	900
ctgaagagtc	ggtatctgaa	gcctagtcag	gtttctgtag	tcataagaaa	tgttcttttc	960
ctagaa						966

<210> 669

<211> 594

<212> DNA

<213> Unknown (H38g518 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(594)

<223> n = A,T,C or G

<400> 669

gnnecggctac	tactacccat	gtactgtttc	ctgnctatac	tgctccgccac	tgacctcggc	60
ctgtccatat	ccactctggg	caccatgctg	agtatattct	ggttcaatgt	gagggaaatc	120
agctttaatg	cctgcttgct	ccacatgttc	tttattaaat	tcttactgt	catggaatcc	180

tcagtgtgt	tggccatggc	ttttgatcgt	tttgtggccg	tctctaatacc	ccttaggtat	240
gccatgattt	taactgactc	cagaatagct	caaattggag	tggcaagtgt	catcaggggg	300
ctcctaatagc	tgacaccaat	gtagcactt	cttataagac	tttcctactg	ccacagcccg	360
agtactccac	cactcctact	gctaccaccc	tgatgtgatg	aagttctcat	gcacagacgc	420
cagaatcaac	agtgcagttg	ggctgactgc	catgtttctt	actgggttgg	gtagacttac	480
ttctcactct	cctttcttat	gttttgatca	ttaggactgt	ccttancgtt	gcttccccag	540
aagagaggaa	ggaaaccctt	cagtacatgt	gtctcccaca	ttgggggctt	ttgc	594

<210> 670

<211> 939

<212> DNA

<213> Unknown (H38g519 nucleotide)

<220>

<223> Synthetic construct

<400> 670

atgagccctg	agaaccagag	cagcgtgtcc	gagttcctcc	ttctgggcct	ccccatccgg	60
ccagagcagc	aggctgtgtt	cttcaccctg	ttcctgggca	tgtacctgac	cacgggtgctg	120
gggaacctgc	tcacatgct	gtcatccag	ctggactctc	accttcacac	ccccatgtac	180
ttcttctca	gccacttggc	tctcactgac	atctcctttt	catctgtcac	tgccccaaag	240
atgctgatgg	acatgceggac	taagtacaaa	tcgatcctct	atgaggaatg	cattttctcag	300
atgtattttt	ttatattttt	tactgacctg	gacagcttcc	ttattacatc	aatggcatat	360
gaccgatatg	ttgccatatg	tcaccctctc	cactacactg	tcacatgag	ggaagagctc	420
tgtgtcttct	tagtggctgt	atcttggtat	ctgtcttgtg	ccagctccct	ctctcacacc	480
cttctcctga	cccggtgtgc	tttctgtgct	gcgaacacca	tcccccatgt	cttctgtgac	540
cttgtgtccc	tgctcaagct	gtcctgtctc	gatattctcc	tcaatgagct	ggcatgttcc	600
acagtagggg	tggtgggtcat	taccctgcc	ttcatgtgta	tcttggtatc	atatgggtac	660
attggggcca	ccatcctgag	ggctccctca	accaaaggga	tccacaaagc	attgtccaca	720
tgtggctccc	atctctctgt	gggtgtctct	tattatgggt	caatatttgg	ccagtacctt	780
ttcccgaactg	taagcagttc	tattgacaag	gatgtcattg	tggctctcat	gtacacgggtg	840
gtcacaccca	tggtgaacce	ctttatctac	agccttagga	acagggacat	gaaagaggcc	900
cttgggaaac	tcttcagtag	agcaacattt	ttctcttgg			939

<210> 671

<211> 586

<212> DNA

<213> Unknown (H38g520 nucleotide)

<220>

<223> Synthetic construct

<400> 671

ckactactac	tacctatgta	tttttttctk	kgcaacctgt	cactgttaga	tctctgcctt	60
ccttcaatcc	ctgtgccc	gatgtgcag	aatttattaa	ctcaaaggta	aaccatctct	120
atgtgggtact	gcattgtcca	gagtttcttt	ctcatattct	ctggggagcac	agaagcctgc	180
ctactccttg	ccatggcctg	tgatcactct	acttccaact	gccaccctcg	gctcaacgat	240
gtgggttatga	atcagcctgt	ctgtgtcagg	atgggtgattg	cagcatgggc	agtgggattc	300
ctaaactcct	tgacaaagaa	tcttttcatt	tacaacttac	acttctgtgg	ccccagtgtc	360
atccctcact	tctgtgtgta	gctgccttca	ctcttccctc	tctcttgtat	tgatccagct	420
gccagtggag	tccttccctgc	tgggtcatgt	acattgctag	gatttgtgac	ttgccgctgg	480
tcctcttttc	ttactctaac	accatctctg	cctcctagcc	atgtgktttt	ctgaggggtca	540
aggcaaagcc	ttctccacct	gctcctccca	cctcaccgtg	gtgctt		586

<210> 672

<211> 918

<212> DNA

<213> Unknown (H38g521 nucleotide)

<220>

<223> Synthetic construct

<400> 672

atgagccctg	agaaccagag	cagcgtgtcc	gagttcctcc	tcttgggcct	ccccatccgg	60
ccagagcagc	aggccgtggt	cttcgccctg	ttcctgggca	tgtacctgac	cacgggtgctg	120
gggaacctgc	tcatcatgct	gctcatccag	ctagactctc	accttcacac	ccccatgtac	180
ttcttcctta	gccacttggc	cctcactgac	atctcctttt	catctgtcac	tgtccctaag	240
atgctgatga	acatgcagac	tcagcaccta	gccgtctttt	acaagggatg	catttcacag	300
acatatTTTT	tcatatTTTT	tgctgactta	gacagtttcc	ttatcacttc	aatggcatat	360
gacaggatag	tggccatctg	tcacccctta	cattatgcca	ccatcatgac	tcagagccag	420
tgtgtcatgc	tgggtggctgg	gtcctgggtc	atcgcttggt	cggtgtgctct	tttgcatacc	480
ctcctcctgg	cccagctttc	cttctgtgct	gaccacatca	tcctcacta	cttctgtgac	540
cttgggtgccc	tgctcaagtt	gtcctgtctca	gacacctccc	tcaatcagtt	agcaatcttt	600
acagcagcat	tgacagccat	tatgcttcca	ttcctgtgca	tcttgggttc	ttatgggtcac	660
attgggggtca	ccatcctcca	gattccctct	accaagggca	tatgcaaagc	cttgtccact	720
tgtggatccc	acctctcagt	ggtgactatc	tattatcgga	caattattgg	tctctatTTT	780
cttcccccat	ccagcaacac	caatgacaag	aacataattg	cttcagtgat	atacacagca	840
gtcactccca	tgttgaaccc	attcatttac	agtctgagaa	ataaagacat	taagggagcc	900
ctaagaaaac	tcttgagt					918

<210> 673

<211> 591

<212> DNA

<213> Unknown (H38g522 nucleotide)

<220>

<223> Synthetic construct

<400> 673

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tcctcctttg	tgccctctcat	rtagacaat	ttcctggaaa	cccagaggac	catttccttc	120
cctggctgtg	ccctgcagat	gtacctgacc	ctggcgctgg	gatcaacgga	gtgcctgctg	180
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aactcactgc	tacagtccat	ccttgtctgg	cacctccct	tctgtggcca	cgatcatcaac	360
tacttctatg	agatcttggc	agtgctaaaa	ctggcctgtg	gggacatctc	cctcaatgcg	420
ctggcattaa	tgggtggccac	agccgtcctg	acactggccc	ccctcttgct	catctgcctg	480
tcttaccttt	tcattcctgtc	tgccatcctt	agggtacctt	ctgctgcagg	ccggtgcaaa	540
gccttctcca	cctgctcagc	ccaccgcaca	gtgggtgggtg	ttttttatgg	g	591

<210> 674

<211> 985

<212> DNA

<213> Unknown (H38g523 nucleotide)

<220>

<223> Synthetic construct

<400> 674

gttaatggat	ggagtaataa	atcagtgggt	actgaattca	atTTgttggg	gctgtctagc	60
tcttgggaac	tccaagtctt	ctttttcttt	atcttctctg	tgttttatgg	agctgcagtg	120
ttgggaaaca	tccttatcat	catcacagta	attatagact	ctcatttgca	ttccccaatg	180
tactttcttc	ttagcaatct	ctcttccatc	gatgtgtgtc	aggctacatt	tgccactccc	240
aagatgattg	cagacttcct	caacgaacac	aagaccacca	ctttccaggg	atgcatgtca	300
caaactcttt	tcttgcagtg	ttttgggggt	agtgcagatg	tgcttcttgt	tgccatggcc	360
tatgatagat	acattgctat	atgcaaacct	ctgcactaca	tgaccatcat	gaaccggagg	420
gtgtgaactg	ttctgggtgg	ggtttctctg	gccattggca	tctcacactc	agccaccac	480
ctggcattca	aagtcaatct	gcctttctgt	ggaccaaca	gggtagacaa	ttttttctgt	540
gacctctccc	tagtgatcaa	gcttgccctg	ttagacacct	atggttttga	gatactggtg	600
ctcactaaca	gtggctctgt	ctcacttatg	tgtttctctc	ttttgtcat	ttctgacact	660
atcactcctg	ctactgtgca	tcgccaagcc	tctgatggga	tgtccaaggc	cctttccact	720
ctgtctgccc	acattactgt	tgtgcttctc	ttctttggcc	cattaatatt	catctatatt	780

tggccctttg	aaagcttccc	aattgataaa	tttatctctg	tggtttttta	ctgtcttcac	840
tcctctcctt	aaccccatga	tttatactct	gaggaataaa	gatataaagg	aagccatgag	900
gaagctaagg	agatgacatg	tgggttccaa	gcagggtttt	tagacaacta	caaagaagta	960
atacaaattc	ctacttttgg	gcttt				985

<210> 675

<211> 780

<212> DNA

<213> Unknown (H38g524 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(780)

<223> n = A,T,C or G

<400> 675

atgtatttct	tcttgagttt	tttgtctctc	actgatattt	gctttacaac	aagcgttgtc	60
cccaagatgc	tgatgaactt	cctgtcagaa	aagaagacca	tctcctatgc	tgggtgtctg	120
acacagtatg	tattttctct	atgccttggg	caacagtgac	agctgccttc	tttcgtaant	180
gcctttgacc	gctatgttgc	cgtctgtgac	cctttccact	atgtcaccac	catgagccac	240
caccactgtg	tcttgcctgg	ggccttctcc	tgctcattta	cttaccttca	ctcactcctg	300
cacacacttc	tgctgaatcg	tctcaccttc	tgtgactcca	atgttatcca	ccactttctc	360
tgtgacctca	gccctgtgct	gaaattgtcc	tgctcttcca	tatttgcata	tgaaattgtg	420
cagatgacag	aagcacctat	tgttttgggt	actcgttttc	tctgcattgc	tttctcttat	480
atacgaatcc	tcactacagt	tctcaagatt	ccctctactt	ctgggaaacg	caaagccttc	540
tccacctgtg	gtttttacct	caccgtgggt	acgctctttt	atggaagcat	cttctgtgtc	600
tatttacagc	ccccatccac	ctacgctgtc	aaggaccacg	tggcaacaat	tgtttacaca	660
gttttgcata	ccatgctcaa	tccttttata	tacagcctga	gaaacaaaga	cctgaaacag	720
ggcctgagga	agcttatgag	caagagatcc	taggaagcac	cctcttgaaa	aactcgttaag	780

<210> 676

<211> 576

<212> DNA

<213> Unknown (H38g525 nucleotide)

<220>

<223> Synthetic construct

<400> 676

tactactact	accctatgta	tttttttctt	tgcaacctgt	ccttcctgga	catgagcttc	60
accacgagca	ttgtcccaca	gctcctgggt	aacctctggg	gaccacagaa	aaccataagc	120
tatggagggt	gtgtgggtcca	gttctatata	tcccattggc	tgggggcaac	cgagtgtgtc	180
ctgctggcca	ccatgtccta	tgaccgctac	gctgccatct	gcaggccact	ccattacact	240
gtcattatgc	atccacagct	ttgccttggg	ctagcttttg	cctcctgggt	gggggggtctg	300
accaccagca	tggtgggctc	cacgctcacc	atgctcctac	cgctgtgtgg	gaacaattgc	360
atcgaccact	tcttttgcca	gatgcccctc	attatgcaac	tggttgtgtg	ggataaccagc	420
ctcaatgaga	tgggagatgt	acctggccag	ccttgccttt	gttgcctctg	ctctgggggt	480
catcctgggt	tcttacggcc	acattgccgg	gccgkgttga	agaacaagtc	agcagaaggg	540
cggagaaagg	cattcaacac	ctgttctttc	cacgtg			576

<210> 677

<211> 929

<212> DNA

<213> Unknown (H38g526 nucleotide)

<220>

<223> Synthetic construct

<400> 677

atggatataa	gaaacagctc	aataataatc	tgagtttgtt	ttgttagaat	tcatcagcac	60
ttgggaactt	gaaattttgt	ttcttaaata	tttttggttg	cctatgcagc	aatcatggca	120
ggaaacctca	ctgcaatcgc	tgtaacctcc	aatcctcccc	tttgctcaac	acctatgtac	180
ttctctcttg	gaaatctctc	ctttctcagt	atgtttattt	ccacagtcac	aatctctaag	240
atgggtccaga	cgttctcagg	gagaataaaa	ccacttcctc	atggggctgt	atggctcaga	300
tctccacttc	ttaggaggca	gtgagatgac	tcttctcata	tttatggctg	ttgatcagca	360
cattgcaata	tgcagacctc	ttcactgcag	aaccatcacg	aactgcaggg	tactcatggc	420
cactcatggg	ctctgtgctg	ctatcacggg	ctgttggttt	tgtgcatact	ataagccaga	480
ttgtttttat	tatcaccttg	cccttctgtg	gccccagtg	ggtggacaat	ttattttgag	540
accttctctc	agttctgaag	cttgccctgca	ctgagactta	tgatctggag	ttgctggtaa	600
ttgctaaaag	tggacagttg	tctttcatct	gcttcatagt	cttgctcatt	ttctactacta	660
ttattctggt	aactgtgcag	catcgatcct	ctgatgcact	ctccaaggct	ctgtccacac	720
tgtctgctca	tactactgca	gtcactctat	ttttatgagc	catgtgtcta	catttacact	780
tggccattta	ggagcttttc	agtggataca	tttctttctg	tgttttatcc	agttacaccc	840
ttactgaacc	ccattactta	cagtctgaga	tgaaagcatc	tatacatcaa	ctgaggaccc	900
aacacatcat	ctccagacaa	accttctct				929

<210> 678

<211> 595

<212> DNA

<213> Unknown (H38g527 nucleotide)

<220>

<223> Synthetic construct

<400> 678

ctactactac	ccatgtattt	ttttctgtgc	aacctgtccc	tggtggactt	tggttattcc	60
tcagctgtca	ctcccaaggt	gatgggtggg	tttctcacag	gagacaaatt	catattatat	120
aatgcttgtg	ccacacaatt	cttcttcttt	gtagccttta	tactgtcaga	aagtttcctc	180
ctggcatcaa	tggcctatga	ccgctatgca	gcattgtgta	aacctctgca	ttacaccacc	240
accatgacaa	caaatgtatg	tgctcgccctg	gccataggct	cctacatctg	tggtttcctg	300
aatgcatcca	ttcatactgg	gaacactttc	aggctctcct	tctgtagatc	caatgtagtt	360
gaacactttt	tctgtgatgc	tcctcctctc	ttgactctct	catgttcaga	caactacatc	420
agtgtgatgg	ttattttttt	ttgtgggtgg	attcaatgac	ctcttttcta	tcctggtaat	480
cttgatctcc	tacttattta	tatttatcac	catcatgaag	atgcgctcac	ctgaaggacg	540
ccagaaggcc	ttttctactt	gtgcttccca	ccttactgca	gtttccatct	tttat	595

<210> 679

<211> 945

<212> DNA

<213> Unknown (H38g528 nucleotide)

<220>

<223> Synthetic construct

<400> 679

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accagctccc	aggatgtaga	gtttcttctc	tttgccctct	tctcggttat	ctatgtggtc	120
acagtttttg	gtaaccttct	tattatagtc	acagtgttta	acacctctaa	cctgaataact	180
cccattgtatt	ttctccttgg	taatctctct	ttttagata	tgaccttgc	ttcttttgcc	240
acctctaagg	tgattctgaa	cttggttaaaa	aagcagaagg	taatttcttt	tgctgggtgc	300
ttcactcaga	tatttctcct	tcacttactg	ggtgggttg	aaatgggtact	gttggtctcc	360
atggcttttg	acagatatgt	ggccatttgt	aagccctac	actacatgac	catcatgaac	420
aagaaggat	gtgttttgct	tgtagtgacc	tcattggctct	tggttctcct	tactcaggg	480
tttcagatac	catttgctgt	gaacttgccc	ttttgtggtc	ccaatgtgg	agacagcatt	540
ttttgtgacc	tccttttgg	tactaagctt	gcctgtatag	acatatattt	tgtacaggta	600
gtcattgttg	ccaacagtgg	cataatctcc	ctgagctgtt	tcattatttt	gcttatctcc	660
tacagtctga	tcctcataac	cattaagaac	cactctccta	ctgggcaatc	taaagcccg	720
tcacttttga	ctgtctcacat	cacagtgggt	attctctctt	ttggcccatg	catctttatc	780
tacatttggc	ccttcggcaa	ccactctgta	gataagttcc	ttgctgtgtt	ttataccatc	840
atcactccta	tcttgaatcc	aattatctat	actctgagaa	acaaagaaat	gaagatatcc	900

atgaaaaaac tctggagagc ttttgtgaat tctagagaag atact

945

<210> 680

<211> 951

<212> DNA

<213> Unknown (H38g529 nucleotide)

<220>

<223> Synthetic construct

<400> 680

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cttgaatggc	aggccctgct	ctttgtcatt	ttcctgctca	tctactgcct	gaccattata	120
gggaatgttg	tcacatcac	cgtggtgagc	cagggcctgc	gactgcactc	ccctatgtac	180
atgttccctc	agcatctctc	ctttctggag	gtctggtaca	cgccaccac	tgtgcccctt	240
ctcctagcca	acctgctgtc	ctggggccaa	gccatctcct	tctctgcctg	catggcacag	300
ctctacttct	tcgtattcct	cggegccacc	gagtgtcttc	tcttggcctt	catggcctat	360
gaccgttacc	tggccatctg	cagcccactc	cgctaccctt	ttctcatgca	tcgtgggcta	420
tgtgccagg	tgggtggtgt	ctcatggtgc	acaggggtca	gcacaggctt	tctgcattcc	480
atgatgattt	ccaggttggg	cttctgtggg	cgcaatcaga	ttaaccattt	cttctgcgac	540
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atcctgtcaa	ttgcctgtgt	gtgcatttgt	ttttttctga	cactggggcc	ctatgttttc	660
attgtgtcct	ccatattgag	aatcccttcc	acctctggcc	ggagaaagac	cttttccaca	720
tgtggctccc	acctggctgt	tgtaactctc	tactacggga	ccatgatctc	catgtatgtg	780
tgccccagtc	cccacctgtt	gcctgaaatc	aacaagatca	tttctgtctt	ctacactgtg	840
gtcacaccac	tgctgaacct	agttatctac	agcttgagga	acaaagactt	caaagaagct	900
gttagaaagg	tcattgagaag	gaaatgtggt	attctatgga	gtacaagtaa	a	951

<210> 681

<211> 1005

<212> DNA

<213> Unknown (H38g530 nucleotide)

<220>

<223> Synthetic construct

<400> 681

tctacagacc	cacagaatct	aacagatgtc	tctatatctc	tcttcctaga	agctcagagg	60
atccagaatg	gcagccggtc	ctcactgggc	tgtgcctgtc	catgtgcctg	gtcacgggtg	120
tggggaaacct	gtcatcatc	ctggccgtca	gccctgactc	ccacctccac	atccccatgt	180
acttcttctc	ctccaaacctg	tccctgcctg	acatcggttt	cacctccacc	acggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcacttc	ctacgcaggc	tgctgactc	300
agatgtctct	ctttggccatt	tttggaggca	tggaagagag	acatgtctct	gagtgtgata	360
gcctatgagc	ggtttgtagc	catctgtcac	cctctatatc	attcagccat	catgaaccca	420
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tacacgggtg	tcacccccat	gccgaacccc	ttcatctaca	gcctgagaaa	cagggatatg	900
aaaagtgtcc	tgacgcggcc	acatggcagc	acgatctcat	ctcaatatct	tcttatttgt	960
tccattcctt	ttgtagtgtg	ggttaaaaaa	ggcagcaagg	tcaaa		1005

<210> 682

<211> 990

<212> DNA

<213> Unknown (H38g531 nucleotide)

<220>

<223> Synthetic construct

<400> 682

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gatccagaac	tgcagccggt	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacggtg	120
ctgaggaacc	tgtcagcac	cctggctgtc	agctctgact	ccccctcca	caccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctggc	catagttccc	240
aagatgactg	tggacatgca	gtctcatagc	agagtcattc	ctcatgcggg	ctgcctgaca	300
cagatgtctt	tcttggtcct	ttttgcatgt	atagaagaca	tgttcctgac	tgtgatggcc	360
tatgacagat	ttgtagccat	ctgtcgccct	ctttactacc	cagtcattcat	aaatcctcac	420
ctctgtgtct	tcttcgtttt	ggtgtccttt	ttccttagcc	tgttggtattc	ccagctgcac	480
agttggattg	tgtgacaatt	caccttctcc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	aacttctcta	ccttgccctgt	tctgacagca	tcataaatag	catattcata	600
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aaaattgtcc	cctccattct	aaggatttca	tcgtcagatg	ggaagtataa	agccttcacc	720
acctgtggct	ctcacctagc	agttgtttgc	ttatttgatg	gaacaggcat	tggcatgtac	780
ctgacttcag	ctgtggcacc	acccccagg	aatgggtgtg	tggcgctcagt	gatgtacgct	840
gtggtcaccc	ccatgctgaa	ccctttcatc	tacagcctga	gaaacaggga	cattcaaaac	900
acccgtgtgga	ggctgcgcag	cagaagagtg	gaatctcatg	atctgttcca	tccttttttt	960
gtgtgggtga	gaaagggcaa	ccacattaaa				990

<210> 683

<211> 1005

<212> DNA

<213> Unknown (H38g532 nucleotide)

<220>

<223> Synthetic construct

<400> 683

tctacagacc	cacaaaatct	aatagatgtc	tttgtattcc	tcctcctgga	acctcagagg	60
atccagaacg	gcagctgggc	cttgctgggc	tgttcctgtc	catgtgcctg	gtcacgggtg	120
tggggaacct	gtcatcatc	ctggccgtca	gccctgactc	ccacctccac	accccatgt	180
acttcttctc	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agttgattgt	ggacatccaa	tcttacagca	gagtcattct	ctatgcaggc	tgcctgactc	300
agacgtctct	ctttgccatt	tttggaggca	tgggaagagag	acatgctcct	gagtgatgatg	360
gtctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccgt	catgaacccc	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttc	tcagtctttt	agacgcccag	480
ctgcacaact	tgattgcctt	acaaatgacc	tgcttcaagg	atgtggaaat	tcctaatttc	540
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atcatgtatt	ttcctgctgc	catatttggt	tttcttccca	tctcggggac	ccttttctct	660
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tacactgtgg	tcaccccat	gctgaacccc	ttcatctaca	gcctgagaaa	caggataact	900
aaaagtgtcc	tgcggcgccc	gcacggcagc	acggtgtaat	cttgatatct	tcttatctgt	960
tccattcctt	ttgtagtgtg	ggttaaaaaa	ggcagaaagg	tcaaa		1005

<210> 684

<211> 960

<212> DNA

<213> Unknown (H38g533 nucleotide)

<220>

<223> Synthetic construct

<400> 684

cacacagagc	cacggcatct	cacagggtgc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcctgt	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacagtg	120
ctaaggaacc	tgtcatcat	cctggctgtg	agctctgact	cccacctcca	caccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcagtt	tcacctcggc	cacggttccc	240

aagatgacgg	tggacatgca	gtcgcacagc	agagtcacat	cttatgcggg	ctgcctgaca	300
cggatgtctt	tcttcgtcct	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatggcc	360
taggactgct	ttgtagccat	ctgtgcacct	ctgcactacg	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttagtttt	ggtgtccttt	ttccttagcc	tggtggattc	ccagctgcac	480
agtttagattg	tgttacaatt	caccttcttc	aagaatgtgg	aaatctctca	ttttgtctgt	540
gagccatctc	aacttctcaa	ccttgccctgt	tctgacagct	tcacaaatag	catattcatg	600
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gtggtcaccc	ccatgctgaa	ccctttcatc	tacagcctga	gaaacaggga	cattcaaagc	900
accctgtgga	ggctgtgcag	cagaacagtt	aaatctcttg	atctgttcca	ttctttttct	960

<210> 685

<211> 982

<212> DNA

<213> Unknown (H38g534 nucleotide)

<220>

<223> Synthetic construct

<400> 685

atttcccttc	ttttctgggt	ccttctcttg	gtcatttcta	gagttttggt	agccatggca	60
tgaggaaaca	gcactgaagt	gactgaattc	tgtcttctgg	gatttggtgc	ctagcaagag	120
ttttgggtgta	tcctcttcat	tatatctctt	ctcatctatg	tgacctccat	aatgggtaat	180
agtggataa	tcttactcat	caacacagat	tccagatttc	aaacacccat	gtactttttt	240
ctacaacatt	tggcttttgt	tgatatctgt	tacacttctg	ctatcactcc	caagatgctc	300
caaagcttca	cggagaagaaa	gaatttgata	tcattttggg	gctgcatgat	acaattattg	360
gtttatgcaa	catttgcaac	cagtgaactgt	tatctctctg	ctatgatagc	agtggaccat	420
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ccaattcttg	ccctttcatg	ctccaatatt	gacatcaaca	tcagtctact	tgttgtcttt	660
gtgggattta	acttgatggt	cactgggttg	gtagtcacat	tttctacat	ctacatcatg	720
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tcccacctga	ccacagttgc	cattttctat	gggacactct	cttaccatgca	cttaccagtc	840
tcatctaat	aattcccagg	agaatatgaa	agtggcctct	atattttatg	gcactgttat	900
tccatgttg	aatcctttta	tctatagctt	gagaaataag	gaagtaaaag	aagcttttaa	960
attgataggg	aaaaagttct	tt				982

<210> 686

<211> 927

<212> DNA

<213> Unknown (H38g535 nucleotide)

<220>

<223> Synthetic construct

<400> 686

atgacactag	gaaacagcac	tgaagtcact	gaattctatc	ttctgggatt	tgggtgccag	60
catgagtttt	ggtgtatcct	cttcattgta	ttccttctca	tctatgtgac	ctccataatg	120
ggtaaatagtg	gaataatctt	actcatcaac	acagattcca	gatttcaaac	actcacgtac	180
ttttttctac	aacatttggc	ttttgttgat	atctgttaca	cttctgctat	cactcccaag	240
atgctccaaa	gcttcacaga	agaaaagaat	ttgatgttat	ttcagggctg	tgtgatacaa	300
ttcttagttt	atgcaacatt	tgcaaccagt	gactgttatc	tcctggctat	gatggcagtg	360
gateccttatg	ttgccatctg	taagcccctt	cactatactg	taatcatgtc	ccgaacagtc	420
tgcatecgtt	tggtagctgg	ttcatacatc	atgggctcaa	taaatgcctc	tgtacaaaca	480
gggtttacat	gttcactgtc	cttctgcaag	tccaatagca	tcaatcactt	tttctgtgat	540
gttcccccta	ttcttgctct	ttcatgctcc	aatgttgaca	tcaacatcat	gctacttggt	600
gtctttgtgg	gatctaactt	gatattcact	gggttggtcg	tcacttttct	ctacatctac	660
atcatggcca	ccatcctgaa	aatgtcttct	agtgcaggaa	ggaaaaaatc	cttctcaaca	720

tgtgtctccc	acctgaccgc	agtcaccatt	ttctatggga	cactctctta	catgtatttg	780
cagtcctcatt	ctaataattc	ccaggaaaaat	atgaaagtgg	cctttatatt	ttatggcaca	840
gttattccca	tgttaaatcc	tttaattctat	agcttgagaa	ataaggaagt	aaaagaagct	900
ttaaaagtga	tagggaaaaa	gttattt				927

<210> 687

<211> 894

<212> DNA

<213> Unknown (H38g536 nucleotide)

<220>

<223> Synthetic construct

<400> 687

atgggtcgag	gaaacagcac	tgaagtgact	gaattccatc	ttctgggatt	tggtgtccaa	60
cacgaatttc	agcatgtcct	tttcattgta	cttcttctta	tctatgtgac	ctccctgata	120
ggaaatattg	gaatgatctt	actcatcaag	accgattcca	gacttcaaac	acccatgtac	180
ttttttccac	aacatttggc	ttttgttgat	atctgttata	cttctgctat	cactcccaag	240
atgctccaaa	gcttcacaga	agaaaataat	ttgataacat	ttcggggctg	tgtgatacaa	300
ttcttagttt	atgcaacatt	tgcaaccagt	gactgttacc	tcctagctat	tatggcaatg	360
gattgttatg	ttgccatctg	taagcccctt	cgctatccca	tgatcatgtc	ccaaacagtc	420
tacatccaac	tcgtagctgg	ctcatatatt	atagggtcaa	taaatgcctc	tgtacataca	480
ggttttacat	tttactgtc	cttctgcaag	tctaataaaa	tcaatcactt	tttctgtgat	540
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gtctttgtgg	gatttgactt	gatgttcaact	gagttgggtca	tcactctttc	ctacatctac	660
attatgggtca	ccatcctgaa	gatgtcttct	actgctggga	ggaaaaaatc	cttctccaca	720
tgtgcctccc	acctgacagc	agtaaccatt	ttctatggga	cactctctta	catgtactta	780
cagcctcagt	ctaataattc	tcaggagaaat	atgaaagttag	cctctatatt	ttatggcact	840
gttattccca	tgttgaatcc	tttaattctat	agcttgagaa	ataaggaagg	aaaa	894

<210> 688

<211> 444

<212> DNA

<213> Unknown (H38g537 nucleotide)

<220>

<223> Synthetic construct

<400> 688

acgtacgacg	gcgcgagggg	ggctctctgta	ttgtttctta	caatacatgc	aaatctacaa	60
tgatgtcaat	aaaaattcaa	ttaaaaatc	atgtagtaaa	aatagttgct	aatctatgct	120
ggagtttact	tgaatgtcac	tatgtctgac	gtcaccttca	agtacacaca	tatcttccat	180
catcctgagc	ttgccctctg	ctatgtgtct	ttttccgcag	ttgtcttcca	cctgacagct	240
gtcaccattt	tctttggagc	tctctcttac	atggacttac	aacctgaatc	tactgtgttt	300
caagagcaag	aaaagccagc	atccatattt	tgtggcatta	tgactctcgt	gttaaacttc	360
cttatctact	gcctgtgaaa	ttaggaagta	aaagaagctc	tacagttaac	aaggaaaaag	420
tattaataca	tgtagactga	gggt				444

<210> 689

<211> 888

<212> DNA

<213> Unknown (H38g538 nucleotide)

<220>

<223> Synthetic construct

<400> 689

atgctagtgt	cacaacagga	gcagcctctt	ctgtttggca	tcttccttgg	catgtacctg	60
gtcaccatgg	tggggaacct	gtcattatc	ctggccatca	gctctgacct	acacctccat	120
actcccatgt	acttctttct	ggccaacctg	tcattaactg	atgcctgttt	cacttctgcc	180
tccatcccca	aaatgctggc	caacattcat	accagagctc	agatcatctc	gtattctggg	240

tgtcttgcac	agctatatatt	cctccttatg	tttgggtggc	ttgacaactg	cctgctggct	300
gtgatggcat	atgaccgcta	tgtggccatc	tgccaaccac	tccattacag	cacatctatg	360
agtccccagc	tctgtgcact	aatgctgggt	gtgtgctggg	tgctaaccac	ctgtcctgcc	420
ctgatgcaca	cactgttgct	gacccgcgtg	gctttctgtg	cccagaaagc	catccctcat	480
ttctattgtg	atcctagtgc	tctcctgaag	cttgccctgct	cagataccca	tgtaaagcag	540
ctgatgatca	tcaccatggg	cttgcctgtc	ctcactgttc	ccctcctgct	gatcgtcttc	600
tcctatgtcc	gcattttctg	ggctgtgttt	gtcatctcat	ctcctggagg	gagatggaag	660
gcctttctcta	cctgtgggtc	tcattctcac	gtggttctgc	tcttctatgg	gtctcttatg	720
gggtgtgtatt	tacttctctc	atcaacttac	tctacagaga	gggaaagtag	ggctgctggt	780
ctctatatgg	tgattattcc	cacgctaaac	ccattcattt	atagcttgag	gaacagagac	840
atgaaggagg	ctttgggtaa	actttttgtc	agtggaaaaa	cattcttt		888

<210> 690

<211> 939

<212> DNA

<213> Unknown (H38g539 nucleotide)

<220>

<223> Synthetic construct

<400> 690

atgaagaggg	agaatcagag	cagtgtgtct	gagttcctcc	tcctggacct	ccccatctgg	60
ccagagcagc	aggetgtgtt	cttcaccctg	ttcttgggca	tgtacctgat	cacggtgctg	120
gggaacctgc	tcatactcct	gtcatccgg	ctggactctc	accttcacac	ccccatgttc	180
ttcttctcca	gccacttggc	tctcactgac	atctcccttt	catctgtcac	tgtcccaaag	240
atgttattaa	gcatgcaaac	tcaggatcaa	tccattcttt	atgcagggtg	tgtaactcag	300
atgtattttt	tcataatttt	cactgatcta	gacaatttcc	ttctcacttc	aatggcatac	360
gatcggtatg	tggccatctg	tcacccctc	cgctacacca	ctatcatgaa	agagggactg	420
tgtaacttac	tagtcaactg	gtcctggatc	ctctcctgta	ccaatgccct	gtctcacact	480
ctcctcctgg	cccagctgtc	cttttgtgct	gacaacacca	tccccattt	cttctgtgat	540
cttgttgccc	tactcaagct	ctcatgtcca	gacatctccc	tcaatgagct	ggtcattttc	600
acagtgggac	aggcagtcac	tactctacca	ctaatatgca	tcttgatctc	ttatggccac	660
attgggggtca	ccatcctcaa	ggctccatct	actaagggca	tcttcaaagc	tttgtccacc	720
tgtggctctc	acctctctgt	gggtgtctctg	tattatggca	caattattgg	actgtatttt	780
ctccccctcat	ccagtgcctc	cagtgcacag	gacgtaattg	cctctgtgat	gtacacgggtg	840
atcaccccat	tgtctgaatcc	cttcattttat	agcctaagga	acagggacat	aaagggagcc	900
ctggagagac	tcttcaacag	ggcaacagtc	ttatctcaa			939

<210> 691

<211> 933

<212> DNA

<213> Unknown (H38g540 nucleotide)

<220>

<223> Synthetic construct

<400> 691

atggaaaacc	aatccagcat	ttctgaattt	ttcctccgag	gaatatcagc	gcctccagag	60
caacagcagt	ccctcttcgg	aattttcctg	tgtatgtatc	ttgtcacctt	gactgggaac	120
ctgctcatca	tcctggccat	tggctctgac	ctgcacctcc	acacccccat	gtactttttc	180
ttggccaacc	tgtcttttgt	tgacatgggt	ttacgtcctt	ccacagttac	caagatgctg	240
gtgaatatac	agactcggca	tcacaccatc	tcctatacgg	gttgccctcac	gcaaattgat	300
ttctttctga	tgtttgggtga	tctagacagc	ttcttctctg	ctgccatggc	gtatgaccgc	360
tatgtggcca	tttggcacc	cctctgtctc	tcacagtcac	tgaggcccca	agtctgtgcc	420
ctaattgctt	cattgtgctg	ggctcctcacc	aatatcgttg	ccctgactca	cacgttcctc	480
atggctcggg	tgtccttctg	tgtgactggg	gaaattgctc	actttttctg	tgacatcact	540
cctgtcctga	agctgtcatg	ttctgacacc	cacatcaacg	agatgatggg	ttttgtcttg	600
ggaggcaccc	tactcatcgt	ccccttttta	tgcattgtca	cctcctacat	ccacattgtg	660
ccagctatcc	tgagggtccg	aaccggtggt	gggggtggca	aggccttttc	cacctgcagt	720
tcccacctct	gcgttggttg	tgtgttctat	gggacctctc	tcagtgccta	cctgtgtcct	780
ccctccattg	cctctgaaga	gaaggacatt	gcagcagctg	caatgtacac	catagtgtact	840

cccatgttga acccctttat ctatagccta aggaacaagg acatgaaggg ggccctaaag 900
aggctcttca gtcacaggag tattgtttcc tct 933

<210> 692

<211> 945

<212> DNA

<213> Unknown (H38g541 nucleotide)

<220>

<223> Synthetic construct

<400> 692

atgggaggca agcagccctg ggtcacagaa ttcactcttg tgggattcca ggttggtcca	60
gcactggcga ttctcctctg tggactcttc tctgtcttct atacactcac cctgctgggg	120
aatgggggtca tctttgggat tatctgcctg gactctaage ttcacacacc catgtacttc	180
ttcctctcac acctggccat cattgacatg tcctatgctt ccaacaatgt tcccaagatg	240
ttggcaaacc taatgaacca gaaaagcacc atctcctttg ttccatgcat aatgcagact	300
tttttgtatt tggcttttgc tggtacagag tgcctgattt tgggtggtgat gtcctatgat	360
aggatgtgg ccacttgcca ccccttccag tacactgtca tcatgagctg gagagtgtgc	420
acgatcctgg cctcaacatg ctggataatt agctttctca tggctctggg ccatataact	480
catattctga ggcgccttt ttgtggccca caaaagatca accactttat ctgtcaaact	540
atgtccgat tcaaatggc ctgtgctggc cctaggctca accagggtgg cctatatgag	600
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ctgtcgcgcc atcttgagga tccagtaatg gggaggccg cagaccgact tactcttct	720
gtccttccc acctttgcat ggtgggactc ctttttgga gcaccatgg catgtacatg	780
gcccccaagt cccgccacc tgaggagcag cagaaggtcc tttccctgt ttacagcctt	840
ttcaaccgga tgctgaaccc cttgatctac agcctgagga acgcagaggt caagggtgcc	900
ctgaaaagag tggtgtggaa acagagatca aagtgaggga tgcca	945

<210> 693

<211> 575

<212> DNA

<213> Unknown (H38g542 nucleotide)

<220>

<223> Synthetic construct

<400> 693

ttgaaggttt attaaaaggc aatatgagtg cagaagcaag gtaagttttt tgtaataatt	60
ttttgttaat aatgtgaaat gtaaggaaaa aatatacaac tttaagtttc tgactgtcct	120
gctagaaact agttttgccc tgcagcgacc cctctgtggg aatctcattg atgacaagtg	180
aaattctgga agtgctaaag ttagtttgcct caagttcact gctcatggat atgatcatga	240
tgggtgggtca acattctct cttgccaatt ccaatgtact tatttataac tatgtgctct	300
gtaatcttat ttttaaagag atcttatggg aatcttccaa gggagttag tttctgcatt	360
tcctggatat atgggttttc gtatattgcc tggctataat ttttagagct ctttacaac	420
tcacaaagat atggggctca acaatgaatg aaattgtacg gtggatgtat tagtattaaa	480
cgtattagta ttaaattgtg tgacataaac tggctcttaa atataatcac aaattagtag	540
ctacaatgct tcaagcattg ttgtcctttt tgaaa	575

<210> 694

<211> 942

<212> DNA

<213> Unknown (H38g543 nucleotide)

<220>

<223> Synthetic construct

<400> 694

atggctgaag aaaatcatat catgaaaaat gagtttatcc tcacaggatt tacagatcac	60
cctgagctga agactctgct gtttgtgggt ttctttgcca tctatctgat caccgtgggt	120
gggaatatta gtttgggtggc actgatattt acacaccgtc ggcttcacac accaatgtac	180

atctttctgg	gaaatctggc	tcttgtggat	tcttgtctgt	cctgtgctat	tacccccaaa	240
atgttagaga	acttcttttc	tgagaacaaa	aggatttccc	tctatgaatg	tgagtagacag	300
ttttattttc	tttgcaactgt	ggaaactgca	gactgctttc	ttctggcagc	aatggcctat	360
gaccgctatg	tggccatattg	caacccactg	cagtagaccaca	tcatgatgtc	caagaaactc	420
tgcatcaga	tgaccacagg	ggccttcata	gctggaaacc	tgcatcccat	gattcatgta	480
gggcttgtat	ttaggttagt	tttctgtgga	tcaaatcaca	tcaaccactt	ttactgtgat	540
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attcttctta	ctattttcaa	aatgaaatcc	aaagagggaa	gggccaagc	tttttctacc	720
tgtgcacccc	actttttgtc	agtctcatta	ttctatggat	ctcttttctt	catgtacgtt	780
agacaaaatt	tgcttgaaga	aggggataaa	gatataccag	ctgcaatttt	atttacaata	840
gtagttccct	tactaaatcc	tttcatttat	agcctgagaa	atagggaagt	aataagtgtc	900
ttaagaaaaa	ttctgatgaa	agaaataatc	tcaagaagat	gg		942

<210> 695

<211> 948

<212> DNA

<213> Unknown (H38g544 nucleotide)

<220>

<223> Synthetic construct

<400> 695

atgcaaggag	aaaacttcac	catttggagc	atttttttct	tggagggtt	ttcccagtac	60
ccagggttag	aagtggttct	cttcgtcttc	agccttgtaa	tgtatctgac	aacgctcttg	120
ggcaacagca	ctcttatttt	gactactatc	ctagattcac	gccttaaaac	ccccatgtac	180
ttattccttg	gaaatctctc	tttcatggat	atttgttaca	catctgcctc	tgttcctact	240
ttgctgggtga	acttgcgtgc	atcccagaaa	accattatct	tttctgggtg	tgctgtacag	300
atgtatctgt	cccttgccat	gggtctccaca	gagtgtgtgc	tcctggccgt	gatggcatat	360
gaccgttatg	tggccatttg	taacccgctg	agatactcca	tcacatgaa	cagggtgcgtc	420
tgtgcacgga	tggccacggg	ctcctgggtg	acgggttgcc	tgaccgctct	gctggaaacc	480
agttttgccc	tgcagatacc	cctctgtggg	aatctcatcg	atcacttcac	gtgtgaaatt	540
ctggcgggtgc	taaagttagc	ttgcacaagt	tcactgtcga	tgaacaccat	catgctgggtg	600
gtcagcatte	tcctcttgcc	aattccaatg	ctcttagttt	gcactctctta	catcttcatc	660
ctttccacta	ttctgagaat	cacctcagca	gaggggaagaa	acaaggcttt	ttctacctgt	720
gggtgccatt	tgactgtggt	gattttgtat	tatggggctg	ccctctctat	gtacctaaag	780
ccttcttcat	caaatgcaca	aaaaatagac	aaaatcatct	cgttgcttta	cggagtgtct	840
acccctatgt	tgaaccccat	aatttacagt	ttaagaaaca	aggaagtcaa	agatgctatg	900
aagaaattgc	tgggcaaaat	aacattgcat	caaacacacg	aacatctc		948

<210> 696

<211> 936

<212> DNA

<213> Unknown (H38g545 nucleotide)

<220>

<223> Synthetic construct

<400> 696

atgatgggta	gaaggaataa	cacaaatgtg	gctgacttca	tccttatggg	actgacactt	60
tctgaagaga	tccagatggc	tctgtttatg	ctatttctcc	tgatatacct	aattactatg	120
ctgggggaatg	tggggatgat	attgataatc	cgcctggacc	tccagcttca	cactcccatg	180
tattttttcc	ttactcacct	gtcattttatt	gacctcagtt	actcaactgt	cgtcacacct	240
aaaaccttag	cgaacttact	gacttccaac	tatatttcc	ttacgggctg	ctttgccag	300
atgttctttt	ttgccttctt	gggtactgct	gaatgttacc	ttctctcctc	aatggcccat	360
gatcgctatg	cagcgatctg	cagtccctta	cactacacag	ttattatgtc	caaaaggctc	420
tgccctcgctc	tcatactagg	gccttatgtg	attggcttta	tagactcctt	tgtcaacgtg	480
gtttccatga	gcagattgca	tttctacgac	tcaaacgtaa	ttcatcactt	tttctgtgac	540
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attattgttg	gttccacctt	gatgggtgtc	cttttcacaa	tatctgcata	ctatgtgttc	660
attctcttta	ccatcttgaa	aattaattcc	acttcaggaa	agcagaaagc	tttctctact	720

tgcgtctctc atctcttggg agtcaccatc ttttatagca ctctgatttt tacttattta	780
aaaccaagaa agtcttattc cttgggaaga gatcaagtgg cttctgtttt ttatactatt	840
gtgattcccc tgctgaatcc actcatttat agtcttagaa acaaagagg gaaaaatgct	900
gtcatcagag tcatgcagag aagacaggac tccagg	936

<210> 697

<211> 634

<212> DNA

<213> Unknown (H38g546 nucleotide)

<220>

<223> Synthetic construct

<400> 697

acaatgttct ataaaaattag tgctttgttc taatgttttg tatcacttta ttttagtaaa	60
aattgagtaa gcaaaaaata tactgggttc tgactatctt tggcttttta gaggcattca	120
ttgccatgaa taaattataa aagttatata gttctctaata atgtttatat ttataaatat	180
gaatatttag ttctctaata tgtttatatt ttataatatg aatatttctg tacattattt	240
cctaaaatgt atttttttct tttgtatctg ttgtctttag ctattaattt ttgatagttt	300
ttctacccat cctcctcttc ccctacttta agaggcagat atctgtgcaa attcctagcc	360
atgtacact aatactacag ctctctgatg acacttttac attatcctca acttttgcc	420
ctcttattga ccctctgtat catcgatgct ctatggaaga ctgttcctta tgtacttaat	480
gctcagaaaa ttctcttgac acagacagga tggcctctgt cttctacaca gtagtcattc	540
ccatgttaaa cccattgatc tggagcccca ggaacaagga tgtgacattg ccctgaggaa	600
agtcatggtc aatagaaaac aggcattatt ttgc	634

<210> 698

<211> 682

<212> DNA

<213> Unknown (H38g547 nucleotide)

<220>

<223> Synthetic construct

<400> 698

tgcattgttct ccttttattt taatttttac catttttttt cccacatgaa aggtcttgca	60
gtcacttaga aatgctgaga taaattgact ggtataaagt aagggtatctg attaatgaaa	120
tttactctaa aactaattgg ccttttcatt gactataaga ctatgcacaa ccacttcgta	180
ctcaaactat caattctctt tccaatgttg tatgaccag taccagctc ttcaaagcac	240
attttttttt cttggtagat ctcaggtctt cttctgttg ctgatggcct agacaactat	300
agggccatct gaaagtcctt gcagtatttg gttgtcatga agcaatggct gtgtgtgttg	360
ctgctggtgg tgccctgggc tggaggattt ttgcacacag taattcaact tggccttatt	420
catgggctcc catcttatga cccaatgtc attggtcgtt ttgtctgtga catggacccc	480
ttaatgaagc ttgtctgtga ctataactc aacagatttg tctattttgc aggtcatgac	540
ttaaatacta ggttttatat atttcgttta tattcagact ggactgttcc cttttggtga	600
tttgactttg gtatcctttt gtaatttttt ccctagagga catgattcta taaatcttgt	660
tatacatagt tattatccct gt	682

<210> 699

<211> 897

<212> DNA

<213> Unknown (H38g548 nucleotide)

<220>

<223> Synthetic construct

<400> 699

atggagccaa ggaaaaatgt gactgacttt gtccctcttg gcttcacaca gaatccaaag	60
gagcagaaag tactttttgt tatgttcttg ctcttctaca ttttgaccat ggtgggcaac	120
ctgctcattg tagtgaccgt aactgtcagt gagaccctgg gctcaccaat gtccttcttt	180
cttgcctggct taacatttat agatatcatt tattcttcat ccatttcccc cagattgatt	240

tcagacttgt	tctttgggaa	taattccata	tccttccaat	ctttcatggc	ccagctcttt	300
atcgagcacc	tttttggtgg	gtcagaggtc	tttctcctgt	tggatgatggc	ctatgaccgc	360
tatgtggcca	tctgtaagcc	cttgacattat	ttggttatca	tgagacaatg	gggtgtgtgt	420
ttgctgctgg	tagtgtcctg	ggttggagga	tttctgcaat	cagtatttca	acttagcatt	480
atztatgggc	tcccattctg	tggccccaat	gtcattgatc	attttttctg	tgacatgtat	540
cccttattga	aactggcctg	cactgacacc	catgttattg	gcctcttagt	gggtggccaat	600
ggaggactgt	cttgcaactat	tgcgtttctg	ctcttactca	tctcttatgg	tgatcctctg	660
cactctctaa	agaaacttag	tcagaaaggg	aggcaaaaag	cccactcaac	ctgcagtcc	720
cacatcactg	tggttgtctt	cttctttgtt	ccttgatttt	ttatgtgtgc	tagacctgct	780
aggaccttct	ccattgacaa	atcagttagt	gtgttttata	cagtcataac	cccaatgctg	840
aaccctttaa	tctacactct	gagaaattct	gagatgacaa	gtgctatgaa	gaagctt	897

<210> 700

<211> 945

<212> DNA

<213> Unknown (H38g549 nucleotide)

<220>

<223> Synthetic construct

<400> 700

atgagtcctg	atgggaacca	cagtagtgat	ccaacagagt	tcgtcctggc	agggtcccca	60
aatctcaaca	gcgcaagagt	ggaattattt	tctgtgtttc	ttcttgtcta	tctcctgaat	120
ctgacaggca	atgtgttgat	tgtgggggtg	gtaagggctg	atactcgact	acagaccctt	180
atgtacttct	ttctgggtaa	cctgtcctgc	ctagagatac	tgctcacttc	tgatcatcatt	240
ccaaagatgc	tgagcaattt	cctctcaagg	caacacacta	tttcttttgc	tgcatgtatc	300
acccaattct	atttctactt	ctttctcggt	gcctccgagt	tcttactgtt	ggctgtcatg	360
tctgcggtac	gctacctggc	catctgtcat	cctctgcgct	accccttgct	catgagtggg	420
gctgtgtgct	ttcgtgtggc	cttggcctgc	tgggtggggg	gactcgtccc	tgtgcttggg	480
cccacagtgg	ctgtggcctt	gcttcttttc	tgtaagcagg	gtgctgtggt	acagcacttc	540
ttctgcgaca	gtggcccaat	gctccgcctg	gcttgaccca	acaccaagaa	gctggaggag	600
actgactttg	tcctggcctc	cctcgtcatt	gtatcttctt	tgctgatcac	tgctgtgtcc	660
tacggcctca	ttgtgctggc	agtctgagc	atccctctct	cttcaggccg	tcagaaggcc	720
ttctctacct	gtacctccca	cttgatagtg	gtgacctctt	tctatggaag	tgccattttt	780
ctctatgtgc	ggccatcgca	gagtggttct	gtggacacta	actgggcagt	gacagtaata	840
acgacatttg	tgacaccact	gttgaatcca	ttcatctatg	ccttacgtaa	tgagcaagtc	900
aaggaagctt	tgaaggacat	gtttaggaag	gtagtggcag	gcggt		945

<210> 701

<211> 772

<212> DNA

<213> Unknown (H38g550 nucleotide)

<220>

<223> Synthetic construct

<400> 701

gtactctgtg	tcatattttg	taaatgaaat	catcatataa	gtttattgag	tttttttgag	60
tacctaatga	cttaataaaa	aaaatatggg	agcatatgta	gtaccatgct	tgtatcaata	120
cggataaagt	atctggaagt	ctttgctgag	aatctttttg	tgctgctgag	attattccac	180
tgatgtggat	gggccatggc	tgttatgtga	ccgtctgtac	tacatgacca	tcgtgaatca	240
atatagggtg	agccatctca	ctggaatggc	atgtactgaa	agctttatcc	aggcacagtt	300
tagatcctct	ccccagtcct	acttcttttc	tatgacccca	atgtcatagc	tcattcatgt	360
gtgacttaaa	cacttttttg	aaactcctct	gcatgggtac	tactaataca	attggtttct	420
ttgttgctgc	caatgggtggg	ttcaactacc	tgtaaacaat	cattttcttg	atggtttctt	480
aagtggccat	cctatgtact	ttgaaaactc	acagcttggg	ggaaagatgc	ttaaagttctc	540
tacctgcac	tctcacacca	ccatgggtcat	cttatctttg	agttctgtat	atctgtgtat	600
ctgtgcccag	tgacccttcc	ccaatcaata	aagcaatggc	tgtgtttcat	accgtgataa	660
atcctatgtt	aaaaccttta	gtctaaccct	cagaaatgca	gaggtgaaaa	gtgctttgag	720
aaaggtctgg	gtcaaaaagt	gacctgaaga	gagaaataat	ctaaacataa	ga	772

<210> 702
 <211> 954
 <212> DNA
 <213> Unknown (H38g551 nucleotide)

<220>
 <223> Synthetic construct

<400> 702
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 ccaagacttg agttactctt ttttgtgctc atcttcataa tgtatgtggt catccttctg 120
 gggaatggta ctctcatttt aatcagcatc ttggaccctc accttcacac ccctatgtac 180
 ttctttcttg ggaacctctc cttcttggac atctgctaca ccaccacctc tattccctcc 240
 acgctagtga gcttcctttc agaaagaaa accattttccc ttcttggtg tgcagtgcag 300
 atgttccctca gcttggccat ggggacaaca gagtgtgtgc ttctgggctg gatggccttt 360
 gaccgctatg tggctatctg caaccctctg agatatccca tcatcatgag taaggatgcc 420
 tatgtaccca tggcagctgg gtccctggatc ataggagctg tcaattctgc agtacaaca 480
 gtgtttgttg tacaattgcc ttctgcagg aataacatca tcaatcattt cacctgtgaa 540
 attctagctg tcatgaaact ggcctgtgct gacatctcag gcaatgagtt catcctgctt 600
 gtgaccacaa cattgttccct attgacacct ttgttattaa ttattgtctc ttacacgtta 660
 atcattttga gcatcttcaa aattagctct tctggagggga gaagcaaacc ttctctacc 720
 tgctcagctc gtctgactgt ggtgataaca ttctgtggga ccatcttccct catgtacatg 780
 aagcccaagt ctcaagagac acttaattca gatgacttgg atgccactga caaacttata 840
 ttcatattct acaggggtgat gactcccatg atgaatcctt taatctacag tcttagaaac 900
 aaggatgtga aggaggcagt aaaacaccta ctgagaagaa aaaattttta caag 954

<210> 703
 <211> 999
 <212> DNA
 <213> Unknown (H38g552 nucleotide)

<220>
 <223> Synthetic construct

<400> 703
 atggaaagga ccaattggac agagatagag ttcattctgc aaggactttc agggtagccca 60
 agagctgaaa aattcctttt cgtgatgtgc ttagtgatgt acctgggtgat tctcctaggt 120
 aatggcacct tgatcattct gacactcctg gatgctcgtc tccacacacc catgtacttc 180
 ttctttggga atctttcctt cctagacatt tggtagacat cctcctccat cccctcaatg 240
 ctgatacact tcctatcaga gaagaaaacc atctccttca ctagatgtgt gattcaaagt 300
 tctgtctctt acactatggg atccaccgag tgtgtgcttc tagcagtgtat ggcataatgac 360
 cgttatgtag ccatctgcaa cctctgaga tatcccatca tcatgggcaa ggcactttgt 420
 attcagatgg tggctgtctc ttggggacta ggctttctca actcattgac agaaactggt 480
 cttgcaatac gggtaccctt ctgtggaaaa aaatgtcatt aatcattttg tttgtgaaat 540
 attggccttt gtcaagctgg cttgcacaga tacttccttg aatgagatta ttataatggt 600
 gggcaatgta atatttttgt tttctccatt actgctgatt tgtatctcct acatctttat 660
 cctttctact gtactaagaa tcaattcagc tgaaggaagg aaaaaggcct tttccacctg 720
 ctgagccac atgacagtgg tgattgtgtt ttatgggaca atcctcttca tgtacatgaa 780
 ggcaaagtcc aaagactctg cttttgacaa actgattgcc ctgttctatg gcatagtcac 840
 ccccatgtct aatcctatca tctatagcct gaggaatata gaggtgcatg gagctatgag 900
 gaaattaatg agtagaccct ggttctggag gaaatgatga cacactgaca cctttgagtt 960
 tatgcacaaa atacgctcac aagtttgaga caacacttt 999

<210> 704
 <211> 966
 <212> DNA
 <213> Unknown (H38g553 nucleotide)

<220>
 <223> Synthetic construct

<400> 704

cacacagagc	catggaatct	cacagatgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggg	cctcgctttg	ctctccctgt	ccctgtccat	gtgtctgggc	120
atggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgtctctcc	cctccacacc	180
cccgtgtact	tcttctcttc	taaactgtgc	tgggctgaca	tcggtttcac	cttggccacg	240
gttcccaaga	tgattgtgga	catgcagtcg	catagcagag	tcattctctca	tgcgggctgt	300
ctgacgcaga	tgtctttctt	catccttttt	gcattgtatag	aaggcatgct	cctgacagtg	360
atggcctatg	actgctttgt	agccatctgt	cgcctctgct	actaccagct	catcgtgaat	420
cctcacctct	gtgtctctct	ccttttgggt	tcctttttcc	ttagcatgtt	ggattcccag	480
ctgcacagtt	gaattgtgtt	acaattcaca	atcatcaaga	atgtggaaat	ctctaatttt	540
gtctgtgacc	cctctcaact	tctcaaaact	gcctgttctg	acagcgtcat	caatagcata	600
ttcatatatt	tcaatagtac	tatgtttggg	tttcttccca	tttcagggat	cctatgggtct	660
tactgtaaaa	tcgtcccttc	cattctaagg	atttcatcat	cagatgggaa	gtataaagcc	720
ttctccacat	gtggctctca	cctagcagtt	gtttgctgat	ttatagaac	aggcattggc	780
atgtacatga	cttcacacgt	gtcaccaccc	caggaatg	gtgtggtggc	gtcagcagtg	840
ttctctgtgg	tcaccccat	gctgaacctt	ttcatctaca	gcctgagaaa	caggacata	900
caaagtgcc	tgcggaggct	gctcagcaga	acagtcgaat	cttatgatct	gttccatcct	960
ttttct						966

<210> 705

<211> 937

<212> DNA

<213> Unknown (H38g554 nucleotide)

<220>

<223> Synthetic construct

<400> 705

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aaggccctgc	agggccctct	gttctgggtg	gtgcttctgg	tctacctggg	caccttgctg	120
ggtaactccc	tgatcatact	cctcacacag	gtcagccctg	ccctgcactc	ccccatgtac	180
ttcttctctg	gccaactctc	agtgggtggg	ctcttctaca	ccactgacat	cggtcccagg	240
accctggcca	atctgggctc	cccgcacccc	caggccatct	ctttccaggg	ctgtgcagcc	300
cagatgtacg	tcttcattgt	cctgggcate	tcggagtgtc	gcctgctcac	ggccatggcc	360
tatgaccgat	atgttgccat	ctgccagccc	ctacgctatt	ccacctctt	gagcccacgg	420
gcctgcactg	ccatgggtgg	tacctctctg	ctcacaggca	tcatacggc	caccacccat	480
gcctccctca	tcttctctct	accttttctg	agccaccgca	tcataccgca	ctttctctgt	540
gacatcctgc	cagtactgag	gctggcaagt	gctgggaagc	acaggagcga	gatctccgtg	600
atgacagcca	ccatagtctt	cattatgate	cccttctctc	tgattgtcac	ctcttacatc	660
cgcatacctg	gtgccatcct	agcaatggcc	tccacccaga	gccgccgcaa	ggtcttctcc	720
acctgtctct	cccatactgt	cgggtggtct	tctcttcttt	ggaacagcca	gcatacaccta	780
catccggcgg	caggcaggct	cctctgtttac	cacagaccgc	gtctcagtc	tcttctacac	840
agtcatcaca	cccatactca	acccatcat	ctacacctt	cggaacaagg	acgtgaggag	900
ggccctgcga	cacttggtga	agaggcagcg	ccctca			937

<210> 706

<211> 930

<212> DNA

<213> Unknown (H38g555 nucleotide)

<220>

<223> Synthetic construct

<400> 706

atggctggca	acaatttcac	tgaggttacc	gtcttcatcc	tctctggatt	tgcaaatcac	60
cctgaattac	aagtcagctt	tttcttgatg	tttctcttca	tttatctatt	cactgttttg	120
ggaaacctgg	gactgatcac	gttaatcaga	atggattctc	agcttcacac	ccctatgtac	180
tttttctctg	gcaatttagc	atttattgac	atattttact	cctctactgt	aacacctaaag	240
gcattgggtg	atttccaatc	caatcggaga	tccatctcct	ttgttggctg	ctttgttcaa	300
atgtactttt	ttgttggatt	ggtgtgttgt	gagtgtttcc	ttctgggata	aatggcctac	360
aatcgctaca	tagcaatctg	caatccctta	ctgtattcag	tagtcatgtc	ccaaaaagtg	420

tccaactggc	tgggagtaat	gccatatgtg	ataggcttca	caagctcgct	gatatctgtc	480
tgggtgataa	gcagtttggc	gttctgtgat	tccagcatca	atcatttttt	ttgtgacacc	540
acagctcttt	tagcactctc	ctgtgtgat	acattcggca	cagaaatggt	gagctttgtc	600
ttagctggat	tcactcttct	tagctctctc	cttatcatca	cagtcactta	tatcatcate	660
atctcagcca	tcctgaggat	ccagtcagca	gcaggcaggc	agaaggcctt	ctccacctgc	720
gcacccacc	tcattggctgt	aactatcttt	tatgggtctc	tgattttcac	ctatttgcaa	780
cctgataaca	catcatcgct	gacccaggcg	caggtggcat	ctgtattcta	tacgattgtc	840
attcccatgc	tgaatccact	catctacagt	ctgaggaaca	aagatgtgaa	aaatgctctt	900
ctgagagtca	tacatagaaa	actttttcca				930

<210> 707

<211> 471

<212> DNA

<213> Unknown (H38g556 nucleotide)

<220>

<223> Synthetic construct

<400> 707

atctgtagcc	ccttgctgta	cagtgtcatc	atatccaata	aggcttgctt	ttctctgatt	60
ttaggggtgt	atataatagg	cctggtttgt	gcacagttc	atacaggctg	tatgtttagg	120
gttcaattct	gcaaatttga	tttgattaac	cattatttct	gtgatcttct	tcccctccta	180
aagctctctt	gctctagtat	ctatgtcaac	aaactactta	ttctatgtgt	tggtgcattt	240
aacatccttg	tccccagctt	gaccatcctt	tgctcttaca	tctttattat	tgccagcatc	300
ctccacattc	gctccactga	gggcagggtcc	aaagccttca	gcacttgtag	ctccacatg	360
ttggcggttg	taatcttttt	tggatctgca	gcattcatgt	acttgcagcc	atcttcaatc	420
agctccatgg	accaggggaa	agtatcctct	gtgttttata	ctattattgt	g	471

<210> 708

<211> 529

<212> DNA

<213> Unknown (H38g557 nucleotide)

<220>

<223> Synthetic construct

<400> 708

ctggccccgt	cctccagtct	ggccttgggg	acatggcggt	ggcaatggca	cagcatgact	60
gagcttggtt	tggttggtgt	ctcaggtttt	ggttccgtcc	ggggccttct	gttttgggca	120
gtgctctgca	aacatctggt	gaccctgctg	gacaactccc	tgatcgctgt	cctcgccctg	180
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cccaccgcta	ggcggttccc	cgctgctggg	tttcttcgcc	ctccctggca	tcgccgaatg	360
cgcttgcgca	gggcatggc	ctccgcgct	gtgacgccat	ctgccggccg	ctgcattcta	420
ctacctgagg	agccctagtc	ttccgagccc	gcttcgcctt	caccttgccc	ttctgcggcg	480
cagcaccacc	cgctacttcc	ggctggattc	tcggcctgtg	ctgagacct		529

<210> 709

<211> 942

<212> DNA

<213> Unknown (H38g558 nucleotide)

<220>

<223> Synthetic construct

<400> 709

atgaccagaa	aaaattatac	ctcactgact	gagttcgtcc	tattgggatt	agcagacacg	60
ctggagctac	agattatcct	ctttttgttt	tttcttgta	tttatacact	tacagtactg	120
ggaaatctcg	ggatgatcct	cttaatcagg	atcgattccc	agcttcacac	acccatgtat	180
ttcttctctg	ctaacctgtc	ctttgtggac	gtttgtaact	caactacat	caccccaaag	240
atgctggcag	atttattatc	agagaagaaa	accatctctt	ttgctggctg	cttctctacg	300

atgtactttct	ttatctccct	ggcgacaacc	gaatgcatcc	tctttggggt	aatggcctat	360
gacaggatg	cggccatag	tcgcccgtg	ctttactcct	tgatcatgtc	caggaccgtc	420
tacctaaaa	tggcagccgg	ggcttttgc	gcagggtgc	tgaacttcat	ggtcaacaca	480
agccatgtca	gcagcttg	attctgtgac	tccaatgtca	tccatcactt	cttctgtgac	540
agccccccac	ttttcaagct	ctcttggtct	gacacaatcc	tgaagaaaag	cataagttct	600
attttggctg	gtgtgaatat	tgtggggact	ctgcttgca	tcctctcctc	ctactcctac	660
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tgtgcctctc	acctgacagc	cataattctg	ttctatgcc	cctgcatcta	tacttacctg	780
agacctagtt	ccagctactc	cctgaatcag	gacaaagtgg	cttctgtgtt	ctacacagtg	840
gtgattccca	tgttgaatcc	tctgatctac	agcctcagga	gtaaggaagt	aaagaaggct	900
ttagcgaatg	taattagcag	gaaaaggacc	tcttccttct	tg		942

<210> 710

<211> 941

<212> DNA

<213> Unknown (H38g559 nucleotide)

<220>

<223> Synthetic construct

<400> 710

atgaccagaa	aaaattatac	ctcactgact	gagttcatcc	tattgggatt	agcagacacg	60
ctggagctac	agattatcct	ctttctgtta	tttcttgtga	tttacacact	taccgtactg	120
ggaaaatcgc	ggatgatcct	cttaatcagg	atcgattccc	ggcttcacac	acccatgtat	180
ttcttctctg	ttaacctgtc	ctttgtggac	atttgttact	caaccacccat	caccccaaag	240
atgctggcag	atttattatc	agagaagaaa	accatctctt	ttgctggctg	cttcctacag	300
atgtactttct	ttatcgccct	ggcgacaacc	gaatgcatcc	tctttggggt	aatggcctat	360
gaccggatg	tgaccatag	tcgcccgtg	ctttactcct	tgatcatgtc	caggacagtc	420
tgccataaaa	tggcagccgg	ggcttttgc	gcagggtgc	tgaactccat	ggtcaacact	480
agctatgtca	gcagcttg	attctgtggc	tccaatgtca	tccatcactt	cttctgcaac	540
agccccccac	tttttaagct	ttcttggtct	gacacacact	tgaaggaaag	catattttcc	600
acttttgctg	gtgtgaataa	ggtcggggct	ctgcttgca	tcctctcctc	ctattcctac	660
gttctcttct	ccatttttct	tatgcattca	ggggagggga	ggcacagagc	tttctccacg	720
tgtgcctctc	acctgacagc	cataatcctc	ttctacacca	cctccatcta	tacctacctg	780
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tgatccccat	attgaatcct	ctgatctaca	gcctcaggaa	taaggaagta	aagaaggctt	900
tagcgaatgt	aattagcagg	aaaaggatcc	cttcatttct	g		941

<210> 711

<211> 939

<212> DNA

<213> Unknown (H38g560 nucleotide)

<220>

<223> Synthetic construct

<400> 711

atgagtgggg	agaatgtcac	caaggtcagc	accttcaccc	tggtgggcct	ccccacggcc	60
ccagggtgc	agtacctgtc	cttctcctc	ttcctgtcca	cctacctctt	tgtcctgggtg	120
gagaacctgg	ccatcatcct	catcgtctgg	agcagcacct	ccctccacag	gcccatgtac	180
tactttctga	gtccatgtc	tttctggag	atctggtacg	tgtctgacat	cacccccaa	240
atgctggagg	gcttctcct	ccagcagaaa	cgcactctct	tcgtcgggtg	catgacgcag	300
ctctacttct	tcagctccct	ggtgtgcacc	gagtggtgtc	ttctgcctcc	atggcctacg	360
accgctacgt	ggccatctgc	caccgcgtgc	gctaccacgt	ccttggtgacc	gccgggctgt	420
gctccagctg	gtgggcttct	cctttgtgag	tgcttctcca	tctccatgat	caagggtctgt	480
tttatctcca	gcgtcacgtt	ctgtggctcc	aacgtcttga	accacttct	tctgtgacat	540
ttcccccatc	ctcaacttgg	cctgcacgga	cttctccact	gcagagctgg	tgatttccatc	600
ctggccttca	tcatactgg	gtttccgctc	ctggccacca	tactgtcata	ttggcacatc	660
accctggctg	tcctgcgcac	ccccctggcc	accggctgct	ggagagcctt	ctctacctgc	720
gcctctcacc	tcaccgtgg	caccgtcttc	tatacagcct	tgcttttcat	gtatgtccgg	780
ccccaaagcca	ttgattccca	gagctccaac	aagctcatct	ctgccgtgta	cactgttgctc	840

acgcccaataa ttaacccttt gatttactgc ctgaggaaca aggaatttaa ggacgccttg 900
 aaaaaggcct tgggcttggg tcaaacttca cactaagac 939

<210> 712

<211> 642

<212> DNA

<213> Unknown (H38g561 nucleotide)

<220>

<223> Synthetic construct

<400> 712

ctggctgacc tctgtttctc taccaacata gttcctcagg cactagtcca cctgctttcc	60
agaaagaagg tcattgtatt cacactgtgc gcagctcgac ttctctttct cctcattggg	120
gggtgtaccc agtgcgcctt tcttggagtg atgtcctatg atcgctatgt tgcaatctgc	180
aatcctctgc gttaccctaa catcatgacc tggaaagtgt gtgtccagct ggcaacagca	240
ccatggacca gtggtattct ggtgtctgtg gtagacacca ccttcacact gaggctaccc	300
taccgaggca gtaacagcat tgctcatttc tgggtgtgagg cccctgcact attgatctta	360
gcacccacag acacccatgc atcagagatg gccatttttc ttacgggggt tgtgattctc	420
ctcatacctg tttttctgat tctggtatcc tatggccgta tcatagtaac tgtggtcaag	480
atgaagtcaa ctgtggggag tctcaaggca ttttctacct gtggctccca cctcatggtg	540
gtcatacttt tttatggatc agcaattatc acttacatga caccgaagtc ttccaaacag	600
caggaaaaat cgggtgtctgt tttctatcca atagtgactc cc	642

<210> 713

<211> 948

<212> DNA

<213> Unknown (H38g562 nucleotide)

<220>

<223> Synthetic construct

<400> 713

atgttgaggaga gtaattacac catgccaaact gagttcctat ttgttgaggatt cacagattat	60
ctacctctca gagtcacact gttctttggtta ttcttcttgg tatatacatt aactatgggtc	120
ggaaatatac tcttaataat tctagttaat attaattcaa gccttcaaatt tcccatgtat	180
tattttctta gcaacttate tttcttagac atcagctgtt ctacagcaat cactcctaaa	240
atgctggcaa acttcttggc atccaggaaa agcatctctc cttatgggtg tgcactacaa	300
atgtttttct togttcttt tgctgatgct gagtgcctta tcctggcagc aatggcttat	360
gaccgctatg cagccatctg caacccactg ctctatacta cactgatgtc taggagagtc	420
tgtgtctgct tcatttgtgt ggcatatttc agtggaaagta caacatcact ggtccatgtg	480
tgccctacat tcaggctgtc attttgtggc tccaatatcg tcaatcattt tttctgtgat	540
atcccacctc ttctggcttt atcatgtaca gacactcaga tcaaccagct tctgctcttt	600
gctttgtgca gcttcatcca gaccagcact tttgtggtaa tatttatttc ttactctgc	660
atcctcatca ctgtgttgag catcaagtcc tcagggtggca gaagcaaaac attctccact	720
tgtgcttccc acctcatagc agtcacctta ttctatggag cgctcctgtt tatgtactta	780
gagccaccca ctagctattc cctagacact gataaggtgg tggcagtggt ttatactgtt	840
gtatttccca tgtttaatcc aataatttat agtttcagaa acaaggatgt gaaaaatgct	900
ctcaaaaagc tattagaaa aattggatat tcaaatgaat ggtattta	948

<210> 714

<211> 939

<212> DNA

<213> Unknown (H38g563 nucleotide)

<220>

<223> Synthetic construct

<400> 714

atgtcaaccc acagaaatgg aaatctctca gtggttcctt tgtgggagag catgctgaag	60
ggacttgagg gtggcctgga gaaccaggcc ctgctctttg ctgtgttccc aggtctatac	120

atggtgacca	tcccgggaaa	cctcaccatg	accatggtca	tcacccctga	cacgcacctg	180
cacttcccag	tgaacttctt	cctcaggagc	ctcccccttc	ctggaccttg	gccatgcctc	240
catcacccca	atgccctggt	taacttctct	tcctcgtcca	aggtcgtcac	ctttgcaggc	300
tgtgtgccc	ggttcttttt	ctccttgetg	tctaccactg	agactttcct	gctggccgtg	360
atggcctatg	actgcttcgt	ggccatctgt	agtctggtgt	ggtgccaggt	gaccacgtgc	420
ctctcgatct	gcacatcct	gggaccaggc	acctactgca	gggtctgcct	cagctccatc	480
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gtgacatgcc	ccagctgctc	cggctggcct	gtgcatgcct	ggccctcaat	gagctgacca	600
agttcagcct	tgtggggctc	atgatgggaa	cgccactctt	gtggtcctcg	tctcctttgg	660
ctgtgtcaca	gtgaccatcc	tgaggacacc	ctccgcagcc	agtgacataa	ggtcttcacc	720
tgtagctccc	acgtgatgac	cgtgtccctg	tttgatggga	ctgtgtttgt	cacatatgcc	780
cagccaggga	ctatggagtc	catggagcag	ggcaagggtg	tgtctgtctt	ctacagcctg	840
gtcatcccga	tgcttggccc	cttcatctac	agcctacgaa	acaaggacat	gaaggaggcc	900
ctgcggaggc	tgggccagag	acaagcactc	atgggaagg			939

<210> 715

<211> 756

<212> DNA

<213> Unknown (H38g564 nucleotide)

<220>

<223> Synthetic construct

<400> 715

atgtacttct	tccttggcaa	cctctccttt	tgtgatattct	gctactctac	tgtcttttget	60
cctaagatgc	tagtcaattt	cctatcaaaa	cataagtcca	gtacattttc	tggctgtgtt	120
ctacagagtt	tcccttttgc	agtatatgta	accacaaagg	acattctcct	gtccatgatg	180
gcttatgacc	attacgtggc	catagctaat	cccttgttgt	atacagtcac	tatggcccaa	240
aaagtttcta	ttcagatggt	ccttgcctct	tacttaggtg	ggctcattaa	ttccctgaca	300
cacacaatag	gtttgctcaa	attagacttc	tgtggctcta	atattgtgaa	tcattatttc	360
tgtgatgttc	ctcctcttct	gaggttttct	tgctctgatg	ctcatatcaa	tgaaatgctg	420
cccttgggtct	tctctgggct	cattgcaatg	ttcactttca	ttgtcattat	ggtgtcttat	480
atctgcatca	tcattggcat	ccagagaatc	catgcagctg	agggaaaggta	caaagccttc	540
tccactttgt	tctccacact	aaccacgggt	accttattct	atgggtctgt	ttcttttagt	600
tatatccagc	caagttctca	gtattccttg	gaacaggaga	aggtcttggc	tgtgttttat	660
acactgggtga	tcccatgct	aaaccacact	atttatagcc	tgagaaataa	ggatgtaaaa	720
gatgcagcca	aaaggttgat	atgggtggggg	gaaaaa			756

<210> 716

<211> 954

<212> DNA

<213> Unknown (H38g565 nucleotide)

<220>

<223> Synthetic construct

<400> 716

atgagtgggg	agaatgtcac	cagggtcggc	accttcatcc	tgggtgggctt	ccccacggcc	60
ccagggtctgc	agtacctgct	cttcctcctc	ttcctgctca	cctacctctt	tgtcctgggtg	120
gagaaccttg	ccatcatcct	caccgtctgg	agcagcacct	ccctccacag	gcccatgtac	180
tactttctga	gtcccatgtc	tttcttagag	atctggtacg	tgtctgacat	cacccccaaag	240
atgctggagg	gcttctctct	ccagcagaaa	cgcactctct	tcgtcgggtg	catgacgcag	300
ctctacttct	tcagctccct	ggtgtgcacc	gagtggtgtc	ttctggcctc	catggcctac	360
gaccgctacg	tggccatctg	ccaccgctg	cgctaccacg	tccttgtgac	cccgggctgt	420
gcctccagct	ggtgggcttc	tcctttgtga	gtggcttcac	catctccatg	atcaaggctc	480
gttttatctc	cagcgtcacg	ttctgtggct	ccaacgtctt	gaaccacttc	ttctgtgaca	540
tttcccccat	cctcaagctg	gcctgcacgg	acttctccac	tgcagagctg	gtggatttca	600
ttctggcctt	catcatcctg	gtgtttccac	tccttgccac	catgctgtca	tatgcgcaca	660
tcaccttggc	tgtcctgcgc	atccccctgc	caccggctgc	tggagagcct	tcttcacctg	720
cgctctcac	ctcaccgtgg	tcaccgtctt	ctatacagcc	ttgcttttca	tgtatgtccg	780
ccccaggcca	ttgattcccg	gagctccaac	aagctcatct	ctgtttttga	cacagttatc	840

acccccatct tgaaccctt gatatactgc ctgaggaata aggaatttaa gaatgccttg 900
 aaaaacagtc ggcttgacga ctgcgccgta gaggggaggc tttctagtct tctg 954

<210> 717

<211> 960

<212> DNA

<213> Unknown (H38g566 nucleotide)

<220>

<223> Synthetic construct

<400> 717

atggctgatg ttaattttac attgggttact gagtttatcc ttttggaact gacagatcgt	60
gctgaactga agatggctct cttcgtgttg ttcctgctga tctacacat ttccctgggtg	120
ggaaatatag gaatgctctt tctaactctat gtaactccca aactccacac acctatgtat	180
tatttcctca gctgtctgtc atttgttgat gcctgctatt catcagtttt tgcacccaga	240
atgctgctga acttctttgt tgagcgggag acaatcttat tctctgcatg tattgtgcag	300
tattttttat tctgtctctt ccttaccact gagggttctt tgctggccac aatggcttac	360
gaccgttaca tggccattgt gaacccttta ctttatacag tagctatgac taaaatagtt	420
tgtattgtgc tgcatttgg gtcattgtat ggaggtttaa tcaactcatt gacacataca	480
attggcttgg tgaaactgtc tttctgtggg ccaaagtca tcagtcactt cttctgtgat	540
cttccccac tgttgaagct gtcattgtct gagacatcta tgaatgaatt gttgcttttg	600
atcttctctg gcattattgc cacgtcact tttttgactg tgggtgatct ctacatcttc	660
attgttgctg ctatcctgag gatccgctaa gcagcaggta gacgtaaagc cttctccacc	720
tgcacctctc acctgattac cgtgacctta ttctatggat cgataagctt tagttacatt	780
cagccaaact ccagtatct cctagaacaa gaaaagggtg tgtctgtatt ttataacctg	840
gtggttccta tgttaaacc attgatttac agcctaagga acaagggaagt gaagggaagt	900
gtgaaaaggg ctatagaaat gaaacatttt cttgtttaat ttcatatttc catatccaaa	960

<210> 718

<211> 938

<212> DNA

<213> Unknown (H38g567 nucleotide)

<220>

<223> Synthetic construct

<400> 718

atgttgggga attactctag cgccactgaa ttttttctct taggcttccc tggctcccaa	60
gaagtacgcc gtatcctttt tgtgaacttc ttcttcttgt acgcagtgac agtgatggga	120
aacacgggtca tcatcgtcac tgtctgtgtt gataaacatc tgcagtcccc catgtatttt	180
ttcctgggac acctctgtgt cctggagatc ctgatcacat ccaccgctgc cccttttatg	240
ctgggggggt gctgcttcca agcaccaga tcatgtcttt gacagcctgt gctgcacagc	300
tatatacctt tctttgggta cctcggagtt ggcattaatg ggagtgatgg ctgtggacca	360
ttatgtggct gtgtgtaacc ctttgaggta caacatcatt atgaacagca gcacatgtgt	420
ctggatggtc attgtatcat ggggtgtttg gttccttttt caaatctggc cagtttatgc	480
cacttttcag cttactttct gcaaatcaaa tgtgttagat cttttttact gtgactgagg	540
acaattgtct aaggtatcct gtgaggacac tcttttcaca gagtttatte tttttcta	600
ggctgttttc attatcattg gttcttttga tccctacgat tgtctctac acctacatca	660
ttctccacct cctcaagatc ccgttagcct ctggctggag gaaatccttt tccacttgtg	720
cctcccaact cacctgtgtt gtgatcggct acagcagctg cttgtttctc tacacgaaac	780
ccaagcaaac acaggcagcc aagtataacc ggatagcgtc actgctgggt ttagtgggtg	840
ccccttttct gaaccctttc atcttcaccc tgaggaatga caaattcata caggcctttg	900
gagatggcat gaaacactgc tatcaactcc tcagaatt	938

<210> 719

<211> 942

<212> DNA

<213> Unknown (H38g568 nucleotide)

<220>

<223> Synthetic construct

<400> 719

atataaatgg	ctgacagaaa	tgtcactgtg	ataactgaat	tcatectcct	ggggttgact	60
gataaccctg	aaatgaatgt	tgtcctttct	gtgctctttc	tattaatcta	tctcattact	120
gtcttgggca	acttttggat	tatcataata	attctggcta	gtgcccact	ccattcaccc	180
atgtactttt	tccttagcca	gttggctttc	ttagatttct	gctattcttc	agtcttgatt	240
cctaaaatgt	tggatgaatta	catagcagga	cagaaagcca	tctcttatca	cgggtgcctc	300
cttcagtatt	cctttgtcag	cttggtcctg	actactgaat	gcttctcct	gggtgccatg	360
gcatgtgac	ggtatctcgc	tgtttgccac	ccacttcaat	acaaaggtct	catgactcct	420
actttctgaa	tctatttggg	gactgtttct	tacctgctgg	gctctgtaaa	ctccctcacc	480
cacctgagta	gcttactcag	tttgtctttc	tgtgggtcca	atgttatcaa	ccgttatttc	540
tgtgacattc	cattgctctt	ccaactctcc	tgttccaaca	cccaacacag	taagatttta	600
tttactgtcc	tttctggagc	aacatcagtg	actacctttt	tgatagtggg	tagttcctat	660
ctggtaatcc	tactcattgt	cctgaagata	cattccacca	ggggcagaaa	taaagccata	720
tccacatgtg	ctccccacct	aatggtagtg	actctcttct	acagaacagt	gatatttact	780
tatctgggag	ccaaccctgg	atactcacag	gatagaccca	aaattctgcc	tgtggagtgc	840
acacttttgt	tgtcaatact	aaatcttcta	atatatagcg	tgagaaacag	agaagtcaaa	900
gaagccataa	aaataattat	taagagaaaa	atacttcttc	ag		942

<210> 720

<211> 942

<212> DNA

<213> Unknown (H38g569 nucleotide)

<220>

<223> Synthetic construct

<400> 720

atgttgatga	attactctag	tgccactgaa	ttttatctcc	ttggcttccc	tggtcttgaa	60
gaactacatc	atatacctttt	tgtatatttc	ttctttttct	acttggtgac	attaatggga	120
aacacagtca	tcatactgat	tgtctgtgtg	gataaacgtc	tgagtcctcc	catgtatttc	180
ttctctggcc	acctctctgc	cctggagatc	ctgggtcaca	ccataatcgt	ccccgtgatg	240
ctttggggat	tgtctgtccc	tgggatgcag	acaatatatt	tgtctgcctg	tggtgtccag	300
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gaccgttatg	tggctgtctg	taaccctctg	aggtacaaca	tcattatgaa	cagacacacc	420
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tatgtcatgt	ttcagcttac	ttactgcaaa	tcaaagtgtg	tgaacaattt	tttttgtgac	540
cgagggcaat	tgtctaaact	atcctgcaat	aatactcttt	tcacggagtt	tatcctcttc	600
ttaatggctg	tttttgttct	ctttgggtct	ttgatcccta	caattgtctc	caacgcctac	660
atcatctcca	ccattctcaa	gatcccgcca	tcctctggcc	ggaggaaatc	cttctccact	720
tgtgcctccc	acttcacctg	tgttgtgatt	ggctacggca	gctgcttggt	tctctacgtg	780
aaacccaagc	aaacgcaggc	agctgattac	aattgggtag	tttccctgat	ggtttcagta	840
gtaactcctt	tcctcaatcc	tttcatcttc	acctccggga	atgataaagt	catagaggcc	900
cttcggggatg	gggtgaaacg	ctgctgtcaa	ctattcagga	at		942

<210> 721

<211> 936

<212> DNA

<213> Unknown (H38g570 nucleotide)

<220>

<223> Synthetic construct

<400> 721

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ctggggaatg	tggggatgct	attgataatc	cgccctggacc	tccagcttca	cactcccatg	180
tattttttcc	ttactcacct	gtcattttatt	gacctcagtt	actcaactgt	cgtcacacct	240
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atgttctggt	ttgtcttctt	gggtactgct	gaatgtttat	ttctctcctc	aatggcctat	360

gatcgctatg	cagcgatctg	cagtcctcta	cactacacag	ttattatgcc	caaaaggctc	420
tgcctcgctc	tcactactgg	gccttatgtg	attggcttta	tggactcett	tgtcaatgtg	480
gtttccatga	gcagattgca	tttctgtgac	tcaaacataa	ttcatcactt	tttctgtgac	540
acttcccca	ttttagctct	gtcctgcact	gacacagaca	acactgaaat	gctgatattc	600
attatcgctg	gttccaccct	gatgggtgcc	cttatcaca	tatctgcac	ctatgtgtcc	660
attctctcta	ccatcctgaa	aattaattcc	acttcaggaa	agcagaaaagc	tttctctact	720
tgcgtctctc	atctcttggg	agtcaccatc	ttctatggaa	ctatgatttt	tacttactta	780
aagccaagaa	agtcttattc	cttgggaaga	gatcaagtgg	ctcctgtgtt	ttatactatt	840
gtgattccca	tgctgaatcc	actcatttat	agtcttagaa	acagagaagt	gaaaaatgct	900
ctcattagag	tcatgcagag	aagacaggac	tccagg			936

<210> 722

<211> 730

<212> DNA

<213> Unknown (H38g571 nucleotide)

<220>

<223> Synthetic construct

<400> 722

atgtcatgat	gaattttctg	cctgccaaaa	ataatcatta	ctttattgca	gtaggagtgg	60
gatgcttta	atttagagac	acgggttttt	ctggaagagg	acttcccatg	tggattcagc	120
ttgtggattg	tacgtcaatt	gtcttttttc	ttggaaataa	attaatttgc	tcatttaaaa	180
aaatgatgca	ggaagcatac	gagtactttt	tctctgagca	acttggcttt	ttaagtttct	240
gttatgcttc	agtcattaca	tccaaaatgt	ttggaagtgt	cttgtaaaa	caaaaaaaat	300
taaccttcaa	tgcacatagg	ctgctctctc	accttcatga	ccaccgagtg	cttgctctag	360
ctttcatggc	ctgtgatcaa	tacctgggtca	tttgtaatcc	tcctttgtat	atggtcacca	420
tgtccccccc	gcaaggagtc	tgcattcagc	ttatgcctgc	ctcctatagc	tatagcttcc	480
tgatgacact	ttcacattat	cctcagcctt	tgtctccctt	attgcccctc	tgtatcattg	540
atgttcaatg	gaagcctgtt	ccttatgtac	ttaatgtctc	gaaaattctc	ttgacacaga	600
caggatggcc	tctgtcttct	acacagtagt	cattcccatg	ttgagccctt	tgatctggag	660
cctcaggaac	aaggatgtga	aagatgccct	gaggaaagtc	attgtcaaca	gaaaccaggc	720
attattttgt						730

<210> 723

<211> 936

<212> DNA

<213> Unknown (H38g572 nucleotide)

<220>

<223> Synthetic construct

<400> 723

atggctcctg	aaaatttcac	cagggtcact	gagtttatct	tcacaggtgt	ctctagctgt	60
ccagagctcc	agattccctt	cttccctggc	ttcctagtgc	tctatgtgct	gaccatggca	120
gggaacctgg	gcacatcac	cctcaccagt	gttgactctc	gacttcaaac	ccccatgtac	180
tttttctga	gacatctagc	tatcatcaat	cttggcaact	ctactgtcat	tgccccctaa	240
atgctgatga	actttttagt	aaagaagaaa	actacctcat	tctatgaatg	tgccacccaa	300
ctgggagggt	tcttgttctt	tattgtatcg	gaggtaatga	tgtctggctgt	gatggcctat	360
gaccgctatg	tggccatttg	taaccctctg	ctctacatgg	tgggtggtgc	tcggcggtc	420
tgctcctgc	tgggtgtccct	cacgtacctc	tatggctttt	ctacagctat	tgtggtttca	480
ccttgatat	tctctgtgtc	ttattgctct	tctaataata	tcaatcattt	ttactgtgat	540
attgcacctc	tgtagcatt	atcttgcctc	gatacttaca	taccagaaac	aatagtcttt	600
atatctgcag	caacaaattt	gtttttttcc	atgattacag	ttctagtatc	ttatttcaat	660
attgttttgt	ccattctaag	gatacgttca	ccagaaggaa	ggaaaaaagc	cttttccacc	720
tgcgtctcgc	atatgatagc	agtcacgggt	ttctatggga	caatgctatt	tatgtatttg	780
cagcccaaaa	ccaaccactc	actggatact	gataagatgg	cttctgtgtt	ttacacattg	840
gtgattccta	tgctgaatcc	cttgatctac	agcctgagga	ataatgatgt	aaatgttgcc	900
ttaaagaaat	tcatggaaaa	tccatgttac	tccttt			936

<210> 724

<211> 481
 <212> DNA
 <213> Unknown (H38g573 nucleotide)

<220>
 <223> Synthetic construct

<400> 724
 atatgtggga gtcacagtgg tgttactgaa ttttgtctct taggettccc tggctcccag 60
 taagtatgcc atttgttacc ttcttccttt gtcagtgatt gtaataagaa attatgtaat 120
 catcatagta tgtgttgaga aatgcctgct gttcctccta tatttattct atgggtgacct 180
 ctctgtcatg gaaatcctta tcacatatac tgctgttccc ttgatgctca ggggttggtta 240
 ctttccatga ttcaaacaaat acctttaatg acatgtgctg tccaactcta tatgaacttt 300
 tttgggggta cacaaaattt gcattactgg gagtgatgac tgtgaaccat tatgtggctc 360
 tctgtaactc tttgaagtaa aacatcatta tgagcagaca cactgcatct ggctggtaat 420
 tgtattattg attgggttcc tttctgaaat ctggtcagtc tatgccacat ttcagctccc 480
 t 481

<210> 725
 <211> 971
 <212> DNA
 <213> Unknown (H38g574 nucleotide)

<220>
 <223> Synthetic construct

<400> 725
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 gatccagaac tgcagccggg cctcgctttg ctgtccctgt ccctgtccat gtatctgggc 120
 acgggtgctga ggaacctcct cagtatcctg gctgtcagct ctgactcccc cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcgggtttcac ctcgggccatg 240
 gttcccaaga tgattgtgga catgcagtcg catagcagag tcatctctca tgagggtgc 300
 ctgacacaga tgtttttctt ggctcttttt gcatgtatag aaggcatgat cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctga attaccagat catcgtgaat 420
 cctcacctct gtgtcttctt cattttgatg tcctttttcc ttagcctgtt ggattcccag 480
 ctgcacagtt ggattgtgtt acaattcaca atcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaaact gcctgttctg acagcgtcat caatagcata 600
 ttcacatatt tccatagtac tatgtttgct tttcttccca tttcagcaat ccttttatct 660
 tactataaaa tcgtcacctc cattctcagg atttcatctt cagatgggaa gtataaagcc 720
 ttctccacct gtgactctca cctagcagtt gtttgcgtgat tttatggaac agacattggg 780
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 caaagtgcct tgccggaggct gcgcagcaga acagtcgaat ctcatgatct gttccatcct 960
 ttttcttgtg t 971

<210> 726
 <211> 960
 <212> DNA
 <213> Unknown (H38g575 nucleotide)

<220>
 <223> Synthetic construct

<400> 726
 cacacaaaagc cacggaatct cacaggtgtc tgagaattcc tctctctggg actctcagag 60
 gatccagaac tgcagcccat cctggctggg ctgtccctgt ccatgtatct ggtcacgggtg 120
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 aagatgattg tggacatgca gtcgcatagc agagtcactt cttatgaggg ctgcctgaca 300
 aggatgtctt tcttggctct ttttgcattg acagaagaca tgcttctgac tgtgatggcc 360
 tatgactgct ttgtagccat ctgtcgccct ctgcactacc cagtcactgt gaatcctcac 420

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ctctgtgtct ttttcatttt ggtgtccttt ttccttagcc tgttggattc ccagctgcac      480
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gagccatctc aacttggtcaa ccttgccagt tctgacagcg tcgtcaatag catattcata      600
tatttcgata gtactatgtt tggttttctt cccatttttag gggtcctttt gtctcactat      660
aaaattgtcc cctccattct aaggatttca tcgtcagatg ggaagtataa agtcttcgct      720
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gttttcaccc ccatgctgaa ccctttcatc tacagcctga gaaacaggga catacaaagt      900
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```

<210> 727

<211> 806

<212> DNA

<213> Unknown (H38g576 nucleotide)

<220>

<223> Synthetic construct

<400> 727

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aaactagact cccacctata cacacctgtt gtataattttt taatcaaaca catatttttc      120
attgattttt acaattgtat tgttattttac accaataaaa tgtaaattt tgttgtggat      180
cagaataaca tttcctatta tgcagtggcc acacatatga ctttcttatg ttcattatca      240
ctgaactttt aatcttggta agcatggcct atgattgcta tgtgggtgaac tccaaccctt      300
tgttttacat tgttatcatg tgtctgtgac tgtaacatgt gctgatgagc attccatacc      360
tctgtaatac atttcaatct ctaattatca caatgacctt tttttgacct tctgtagctt      420
tatcatcagt catttctatt gttatgatgt tctcttcttc catatgctat gctcaaatgc      480
acaggaaaga gaattgttga tcacactgct tacagcattt aatttgatcc ctacctctg      540
gtattgctag tgttaaacad tctgattttg ttagccatat gttgaatgca ttctgcaactg      600
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```

<210> 728

<211> 384

<212> DNA

<213> Unknown (H38g577 nucleotide)

<220>

<223> Synthetic construct

<400> 728

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gagatggaga tctttctctc ttgcatcttc tcgcgatttt atgccttcag tctactgagg      120
aatggcatga acatgggact cacctatctg gatgacagag acgacagact acacaccctc      180
atatacattt tctcttcaca cctggccatc aatgacatgt actatgcttc caacaatgtt      240
ccaaagaggc aggtgaacca aatgaaccag aaaaaaaaaa actttgttct atggataaag      300
cagatatttt tgtatttggc ttttgctcac acagagtgcc taatttaggc aatgatgtcc      360
tgtaatagat atgtggcaat ctgc

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384

<210> 729

<211> 921

<212> DNA

<213> Unknown (H38g578 nucleotide)

<220>

<223> Synthetic construct

<400> 729

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ggcaacctaa	ctatgatcat	tttgaccaaa	ctggactccc	acttacatac	acctatgtac	180
ttttctatca	gacatttggc	ttctgttgat	cttggttaatt	ctactgtcat	ttgtcccaag	240
gtgctggcaa	attttgttgt	ggatcgaaat	actatttccct	attatgcatg	tgctgcacag	300
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cagcccaatt	ccactcactt	ctttgatact	gataaaatgg	cttctgtgtt	ttacacttta	840
gtaatcccca	tgcttaacct	tttgatttac	agcttaagaa	acgaagaggt	gaaaaatgcc	900
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<210> 730

<211> 654

<212> DNA

<213> Unknown (H38g579 nucleotide)

<220>

<223> Synthetic construct

<400> 730

ttgcctgaca	tcagttttcac	ctccaccaca	gtccccaaga	tgattgtgga	catccaatct	60
cacagcagag	tcattctcta	tgcaggctgc	ctgactcaga	tgtctctctt	tgctattttt	120
ggaggcatgg	aagagaggca	tgtccttgag	tgtgatggcc	tatgactggg	ttgtagccat	180
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gtgacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gtgaccttcc	tcaactcccc	360
catcttgcat	gttggtgacac	cttcaccatt	aacataatca	tgtatttccc	tgccgccata	420
tttggttttc	ttcccatctc	ggggaccctt	ttctcttact	ctaaaaattgt	ttcctccatt	480
ctgagggttt	catcgctcagg	tgggagggtat	aaagccctct	ccacctgtgg	gtctcacgtg	540
tcagttgttt	gctgagttta	tgggaacaggc	ggtggagggt	acctcagttc	ggatgtgtca	600
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<210> 731

<211> 683

<212> DNA

<213> Unknown (H38g580 nucleotide)

<220>

<223> Synthetic construct

<400> 731

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gacteagatg	tctctctttg	ccatttttgg	aggcatggaa	gagagacatg	ctcctgagtg	180
tgatggccta	tgaccggttt	gtagccatct	gtcaccctct	atgtcattca	gccatcacga	240
accogtggtt	ctgtggcttt	ctagttttgt	tgtctttttt	ttttctcagt	cttttagacg	300
cccagctgca	caacttgatt	gccttacaaa	ggacctgctt	caaggatgtg	gaaattccta	360
atttcttctg	tgacctttct	caattccccc	gtcttgcacg	ttgtggcacc	ttcaccaata	420
acataatcat	gtatttccct	gcagccatat	ttggttttct	tcccatctcg	gggacccttt	480
tctcttacga	taaaattggt	ttctccattc	tgagggtttc	atcatcaggt	gggaagcata	540
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ttggaggcta	cctcagttca	gatgtgtcat	cttccccgag	aaaggctgca	gtggcctcag	660
tgatgtacac	ggtggccatc	ccc				683

<210> 732

<211> 582

<212> DNA

<213> Unknown (H38g581 nucleotide)

<220>

<223> Synthetic construct

<400> 732

tactttttcc	tctccaacct	ctccttcttg	gacctctgtt	tcaccataag	ttgtgtcccc	60
gggatgctgg	tcaacctctg	ggagccaaag	aagaccatca	tcttactggg	ctgctctgtc	120
cägttcttca	tcttcctgtc	cctggggacc	actgagtga	tctcctgac	ggtgatggcc	180
tttgaccgct	acatggctat	ctgccagccc	ctccactatg	ccaccatcgt	ccaccctctg	240
ctgtgctggc	agctggcatc	tgtggcctgg	gtcatgagtc	tggtagagtc	agtgggccag	300
acaccatcca	ccctccactt	gcctttctgc	cccgatcggc	aggtggatga	ttttgtctgt	360
gaggtcccag	ctctaattcg	actctcctgt	gaagacacct	cctacaatga	aatccagttg	420
gctgttgcca	gtgtcttcat	cttggctgtg	cctctcagcc	tcatccttgt	ctcttatgga	480
gccattgcct	gggcagtgtc	aaggactaac	tctgcaaaag	ggcagaggaa	agcttttggg	540
acctgctcct	cccatctcac	tgtggtcacc	ctcttctaca	gc		582

<210> 733

<211> 959

<212> DNA

<213> Unknown (H38g582 nucleotide)

<220>

<223> Synthetic construct

<400> 733

atggtcagtt	ccaatcagac	ctccccctgtg	ctgggggttcc	ttctcctggg	gctctctgcc	60
catccaaagc	tggagaagac	attcttctgtg	ctcctcctgc	tgatgtacct	ggtgatccta	120
ctgggcaatg	gggtcctcat	cctggtgacc	atccttgact	ccgcctgga	cacacccatg	180
tacttcttcc	tggggaaacct	ctccttctctg	gacatctgct	atacaacctc	ctcatccttg	240
acagcttcct	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagta	cagatgttcc	300
tctcccttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggcg	tttgatcgct	360
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cattgaggct	gcccttctgt	ggagacaaca	tcataaatca	cttcacctgt	gagattctgg	540
ctgtcctgaa	gttggcctgt	gctgatctct	ctgtcaatgt	gatcagtatg	ggagtggcca	600
atgtgatctt	cctgggggtc	cctgttctgt	tcactctctt	ctcctatgtc	ttcatcattg	660
ccaccatcct	gaggatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	acctgctctg	720
cccacctcac	tgtcgtgac	gtcttctacg	ggaccatcct	cttcacgtac	gggaagccca	780
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tctatggggt	ggtgaccccc	atgctcaacc	ccatcatcta	cagcctgagg	aacaaggaag	900
tgaaggctgc	tgtgaggaac	ctggatttct	agaaacgctt	cctgcagtga	tgggtggagg	959

<210> 734

<211> 954

<212> DNA

<213> Unknown (H38g583 nucleotide)

<220>

<223> Synthetic construct

<400> 734

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ctgggcaatg	gggtcctcat	cctgatgact	gtgtccaact	cccacctgca	catgcccatg	180
tacttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacata	ctcagtcccc	240
ctcatccttg	acagcttctt	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagtg	300
cagatgttcc	tctcctttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggcg	360
tttgatcgct	acgtggccat	ctgcaacccc	cttaggtacc	ctgtggctcat	gagcaaggct	420
gcctacatgc	ccatggctgt	cggctcctgg	gtagctggaa	gcactgcttc	catggtgcag	480

acatcccttg	caatgaggct	gcccttctgt	ggagacaaca	tcataaatca	cttcacctgt	540
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ggagtgaacca	atgtgatctt	cctgggggtc	ccggttctgt	tcattctctt	ctcctatgtc	660
ttcatcattg	ccaccatcct	gaggatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	720
acctgctctg	cccacctcac	agtcgtggtc	atcttctatg	ggaccatcct	cttcattgtat	780
gggaagccca	agtctaagga	ccgctggggg	gcagacaagc	aagactttgc	agacaaactc	840
atttcccttt	tctatggggg	ggtgaccccc	atgctcaacc	ccatcatcta	cagcctgagg	900
aacaaggatg	taaaggctgc	tgtgaggggac	ttgatatttc	agaaatgctt	tgcc	954

<210> 735

<211> 962

<212> DNA

<213> Unknown (H38g584 nucleotide)

<220>

<223> Synthetic construct

<400> 735

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ctgggcaacg	gggtccctcat	cctgggtgacc	atccttgact	cccgcctgca	cacacccatg	180
tactttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacctc	ctcatccttg	240
acagcttctct	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagta	cagatgttcc	300
tctcctttgc	catggggagcc	acagagtgtg	ttctcctgag	catgatggct	tttgatcact	360
acctggacat	gtgcaacccc	cttaggtacc	ctgtgggtcat	gagcaaggct	gcctacatgc	420
ccatggctgt	tggctcctgg	gcagctggta	tcaccaactc	tgtagtacag	atatccctag	480
caatgtgact	gcccttctgt	ggggacaatg	tcataaatca	cttcacctgt	gagatcctgg	540
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cccacctcac	tgtcgtgac	gtcttctatg	ggatgatcct	cttcattgtat	gggaagccca	780
agtctaagga	cccaatggga	gcagacaaac	aggaccttgc	agacaaactc	atctccattt	840
tctatggagt	ggtgaccccc	attctcaacc	ccatcatcta	cagcccgagg	aacaaagatt	900
tgaaagctgc	tatgaggaac	ctggtggctc	aaaaacacct	aacagagtga	ctatcacaga	960
tc						962

<210> 736

<211> 375

<212> DNA

<213> Unknown (H38g585 nucleotide)

<220>

<223> Synthetic construct

<400> 736

agactaaatg	tcatacgtca	cctgcccttc	tatgggggaca	tcataacca	cttgacctgt	60
gaggtcctgg	ctgtcctgaa	gttggcctgt	gctgacatct	ctatcaacat	gatcaggcaa	120
aaggccttct	ccacctgtc	tgccccacctc	acagttgtgg	tcattcttcta	caggaccatc	180
ctcttcacgc	atgggaagcc	caagtcgaag	gacccactgg	gggcagacaa	gcaggatttt	240
gcagacaaac	tcattctcct	ctcctatgga	gtgggtcacc	ccatgctgaa	caccatcatc	300
tacagcctga	ggaaaaaggg	tgtgaaggct	gctgtgaaga	acctggtatt	tcagaaaccc	360
ctaactgaat	gacag					375

<210> 737

<211> 648

<212> DNA

<213> Unknown (H38g586 nucleotide)

<220>

<223> Synthetic construct

<400> 737

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tcatgttctg	acaccacat	caacgagatg	atgggtttttg	tcttgggagg	caccgtactc	420
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gtccgaaccc	gtggtgggt	gggcaaggcc	ttttccacct	gcagttccca	cctctgcgtt	540
gtttgtgtgt	tctatgggac	cctcttcagt	gcctacctgt	gtcctccctc	cattgcctct	600
gaagagaagg	acattgcagc	agctgcaatg	tacaccatag	tgactccc		648

<210> 738

<211> 957

<212> DNA

<213> Unknown (H38g587 nucleotide)

<220>

<223> Synthetic construct

<400> 738

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ctgggcaatg	gggtcctcat	cctgggtgacc	atccttgact	ccgcctgca	cacgcccag	180
tacttcttcc	tagggaacct	ctccttctctg	gacatctgct	tcactacctc	ctcagtccca	240
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cagatggcac	tctcctttgc	catggcagga	acagagtgt	tgctcctgag	catgatggca	360
tttgatcgct	atgtggccat	ctgcaacccc	cttaggtact	ccgtgatcat	gagcaaggct	420
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atcccccttt	tctatgggt	ggtgaccccg	atgctcaacc	ccatcatcta	tagcctgagg	900
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<210> 739

<211> 653

<212> DNA

<213> Unknown (H38g588 nucleotide)

<220>

<223> Synthetic construct

<400> 739

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ggaggcatgg	aagagagaca	tgctcctgag	tgtgatagcc	tatgagcggg	ttgtagccat	180
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atcttgcata	ttgtggcacc	ttcaccaata	acataatcat	gtatttccct	gccgccatat	420
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taaggggttc	atcatcaggt	gggaagtata	aggccttctc	cacctgtggg	tctcacctgt	540
cagttgtttg	ctgattttat	ggaacaggca	ttggaggcta	cctcggttca	gatgtgtcat	600
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<210> 740

<211> 648
 <212> DNA
 <213> Unknown (H38g589 nucleotide)

<220>
 <223> Synthetic construct

<400> 740
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 gtctgctctc tctatggcac cgtcatcgct gtgtatttca acccatcacc ctctcactta 600
 gctggggagg acatggcagc tgcagtgatg tatccagtgg tgacccca 648

<210> 741
 <211> 988
 <212> DNA
 <213> Unknown (H38g590 nucleotide)

<220>
 <223> Synthetic construct

<400> 741
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 ccagggctgc aggcgcccct gttcctgggtg ttcttgggtca tctacctcat caccctgggtg 120
 ggcaaccttg gcctgatggc tctcatctgg aaggaccccc acctcacac ccccatatac 180
 ttatttcttg gcagtttagc ctttgcagat gcatgcactt catcctctgt aacttctaag 240
 atgcttatca atttttttat caaagaatca tatgctatcc atggctaagt gtgccaccca 300
 gttttacttt ttgggttcca atgcaaccac agaatgcttc ctgctggtag tgatggccta 360
 tgaccgctat gtagccatat gcaatccctt gctttatcca gtgggtgatg ccaatagcct 420
 ctgtactcag tttataggta ttcatatatt tattgggttt ctgcattcag cgattcatgt 480
 gggtttggtta tttagattaa ctttctgcag gtccaatatt atacattatt tctactgtga 540
 aattttacag ctgttcaaaa tttcttgcac caatcctaca gttaatatat ttctgatttt 600
 catcttttca gcatttatac aagtcttcac ttttatgact cttatcgtct cttactccta 660
 tattctctct gccatcctga aaaagaagtc tgagaagggt agaagcaaag ccttctctac 720
 ttgcagtgcc catctgctct ctgtctcttt gttctacggc accctcttct tcatgtatgt 780
 gagtcttagg tctggatcag ctgcagatca ggccaaaatg tattctttat ttacacaat 840
 aataattcct ttactaaatc cttttattta cagcctaagg aacaaagagg ttatagatgc 900
 cctgagaaga atcatgaaga aataaatagt tgtcagacaa cattcaaacc atttcttctt 960
 tatattctgc tgaagaaaac cccaagtc 988

<210> 742
 <211> 636
 <212> DNA
 <213> Unknown (H38g591 nucleotide)

<220>
 <223> Synthetic construct

<400> 742
 tgtcactccc agggctacgg ctagcagggc taggttactt agagggtagg aggctaagtt 60
 cctcgtaaca tgcttgtgct gctcagatgt tcttttttgt agccttggcc acagtggaaa 120
 atatcgctgt tgacatcaat ggcctatgac cactatatag cagtgtgcaa acccctacac 180
 tacactacca ccacgatagc cagtgtatgt gctcatctgg tcataggctc ctatgtctgt 240
 ggcttttctaa atgcctccct ccgcattgtg gacatattca gtctctcttt ctgtaagtcc 300

aatcttgtcc atcacctttt ctgtgatgtt ccaccagtca tggctgtgtc ttgctctggt	360
aaacacatta gcaagaagat tctgggtttt atgtcaagct tcaatgtctt ttggctctt	420
ctagtattct tgacctccta cctgttcata ttcacacca tcttgaagat gcactcagct	480
cagggacact taaaagcttt gtccacctgt gcctctcacc tcattgcagt ctccatcttc	540
tatggaacta ctatctttat gtacttacag cctagctcca gccattccat ggacacagat	600
gaaatggcat ccttgttcta tgctgtgttc atctcc	636

<210> 743

<211> 942

<212> DNA

<213> Unknown (H38g592 nucleotide)

<220>

<223> Synthetic construct

<400> 743

atgggggaca accaatcacg ggtcacagaa ttcctcctgg ttggattcca gctcagtgtg	60
gagatggaag tgctcctctt ctggatcttc tccctgttat atctcttcag cctgctgggg	120
aatgggggtca tctttgggct catctgcctg gactctaagc ttcacacccc catgtacttc	180
ttcctctcac acctggccgt cattgacatg tcctatgctt ccaacaatgt tcccaagatg	240
ctggcaaacc tagtgaacca gaaaagaact atctcgttca tctcttgcat aatgcagact	300
tttttgatt tggcttttgc tgttacagtg tgccatgatt tgggtggatg gtcctatgac	360
agatttgtgg ccactctgcca tcccctgcat tacactgtca tcatgagctg gagagtgtgc	420
actgtcctgg ctgtggcttc ctgggtgttc agcttctctc tggctctggt ccatttagtt	480
ctcattctga ggctgccctt ctgtggggccc caggagggtga accacttctt cggtgaaatc	540
ctgtctgtcc tcaagttggc ctgtgctgac acctggctca accagggtgt catctttgca	600
gcctgcatgt tcatcctggt aggggtgactc tgccctgggtc tgggtctccta cttgcacatc	660
ctggcgggcca tcttgaggat ccagtctggg gagggccgca gaaaggcctt ctctacctgc	720
tctctccacc tctgcgtggg ggggcttttc tttggcagcg ccattgtcat gtacatggcc	780
cccaagtcaa gccattctca agaacggagg aagatccttt ccctgtttta cagccttttc	840
aaccgatcc tgaacccctt catctacagc cttagggaatg cagagggtgaa aggggctcta	900
aagagagtcc tttggaaaca gagatcaatt gaagaatcat tt	942

<210> 744

<211> 648

<212> DNA

<213> Unknown (H38g593 nucleotide)

<220>

<223> Synthetic construct

<400> 744

ttctctgacc tctgcttctc ttccgtgacc attcccaagt tgttacagaa catgcagaac	60
caggacccat ccactcccta tgcggactgc ctgacccaaa tgtacttctt cctgttattt	120
ggagacctgg agagcttctt ccttgtggcc atggcctatg accgctatgt ggccatctgc	180
ttccccctgc actacaccgc catcatgagc cccatgctct gtctcgccct ggtggcgtg	240
tcctgggtgc tgaccacctt ccatgccatg ttacacactt tactcatggc caggttgtgt	300
ttttgtgcag acaatgtgat ccccccacttt ttctgtgata tgtctgctct gctgaagctg	360
gccttctctg acactcgagt taatgaatgg gtgatattta tcatgggagg gctcattctt	420
gtcatcccat tctactcat ccttgggtcc tatgcaagaa ttgtctctc catcctcaag	480
gtcccttctt ctaagggtat ctgcaaggcc ttctctactt gtggctccca cctgtctgtg	540
gtgtcactgt tctatggaac cgttattggg ctctacttat gctcatcagc taatagttct	600
actctaaagg acactgtcat ggctatgatg tacactgtgg tgaccccc	648

<210> 745

<211> 936

<212> DNA

<213> Unknown (H38g594 nucleotide)

<220>

<223> Synthetic construct

<400> 745

atggatggag	agaatcactc	agtggatatc	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tctctgtg	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcgt	tgggtgtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagatatg	tggccctatg	taagcccctc	cactatctga	ccattatgag	cccaagaatg	420
tgcctttcat	ttctggctgt	tgcctggacc	cttgggtgtc	gtcactccct	gttccaactg	480
gcatttcttg	ttaatcttag	cttctgtggc	cctaattgtg	tggacagctt	ctactgtgac	540
cttctctggc	ttctcagact	agcctgtacc	gacacctaca	gattgcagtt	catgggtcact	600
gttaacagtg	ggtttatctg	tgtgggtact	ttcttcatat	ttctaattct	ctacgtcttc	660
atcctgttta	ctgtttggaa	acattcctca	ggtgggttcat	ccaaggccct	ttccactctt	720
tcagctcaca	gcacagtggg	ccttttgttc	tttgggtccac	ccatgtttgt	gtatacacgg	780
ccacacccta	attcacagat	ggacaagtgt	ctggctatct	ttgatgcagt	tctcactcct	840
tttctgaatc	cagttgtcta	tacattcagg	aataaggaga	tgaaggcagc	aataaagaga	900
gtatgcaaac	agctagtgat	ttacaagagg	atctca			936

<210> 746

<211> 384

<212> DNA

<213> Unknown (H38g595 nucleotide)

<220>

<223> Synthetic construct

<400> 746

atgaactcag	agaacctcac	ccggggccg	gttggccctg	ctgaattcgt	cctcctgggc	60
atcacaaatc	gctgggacct	gcgtgtggcc	ctcttcctga	cctgcctgcc	tgtctacctg	120
gtgagcctgc	tgggaaacat	gggcatggcg	ctgctgatcc	gcatggatgc	ccggctccac	180
acacctatgt	acttcttctc	ggccaacctc	tcctgtctgg	atgcctgcta	ttcctccgcc	240
atcgccccca	agatgctagt	ggacctgctg	ctgccccgag	ccaccatccc	ttacacagcc	300
tgtgccctcc	agatgtttgt	ctttgcaggt	ctggctgata	ctgagtgttc	aatgcaatta	360
atgccaaaaa	tgaacaaaaa	tgta				384

<210> 747

<211> 810

<212> DNA

<213> Unknown (H38g596 nucleotide)

<220>

<223> Synthetic construct

<400> 747

atgaccattg	tcttgcttct	agctctggat	tcccggctgc	acacaccaat	gtattttctt	60
ttggcaaacc	tctcattcct	ggacatgtgt	ttcaccacag	gttccatccc	tcagatgtct	120
tacaaccttt	gggtgccaga	taagaccatc	agctatgtgg	gttgtgcat	ccagctgtac	180
tttgtcctgg	ccctgggagg	ggtggagtgt	gtcctcctgg	ctgtcatggc	atatgaccgc	240
tatgctgcag	tctgcaaacc	cctgcactac	accatcatca	tgcacccacg	tctctgtgga	300
cagctggctt	cagtggcatg	gctgagtggc	tttggcaatt	ctctcataat	ggcaccgccg	360
acattgatgc	taccccgctg	tgggcacaga	cgagttgacc	actttctctg	tgagatgcca	420
gactaatttg	gtatggcctg	tgtagacacc	atgatgcttg	aggcactggc	ttttgccttg	480
gcaatcttta	tcattcctgg	accactcatc	ctcattctca	tttcttatgg	ttacgttgga	540
ggaacagtgc	ttaggatcaa	gtcagctgct	gggcgaaaga	aagccttcaa	cacttgcagc	600
tcgcatctaa	ttgttgtctc	tctcttctat	ggtacaatca	tatacatgta	cctccagcca	660
gcaaatactt	attcccagga	ccagggcaag	tttcttacc	tttctacac	aattgtcact	720
cccagtgtta	acccctgat	ctatacacta	agaaacaaag	atgttaaaga	ggccatgaag	780
aaggtgctag	ggaaggggag	tgcagaaata				810

<210> 748

<211> 342
 <212> DNA
 <213> Unknown (H38g597 nucleotide)

<220>
 <223> Synthetic construct

<400> 748
 atttgctttc ctctccacta tcccatccgt ataagcaaaa gagtgtgtgt gatgatgata 60
 acaggatctt ggatgataag ctctatcaac tcttggtctc acacagtata tgcactctgt 120
 atcccatatt gcaagtccag agccatcaat cattttttct gtgatgttcc agctatgttg 180
 acgctagcct gcacagacac ttgggtctat gagagcacag tgtttttgag cagcaccatc 240
 tttcttgtgc ttccctttcac tgggtattgca tgttccatg gccgggttct ccttgctgtc 300
 taccgcatgc actctgcaga agggaggaag aaggcctatt ca 342

<210> 749
 <211> 635
 <212> DNA
 <213> Unknown (H38g598 nucleotide)

<220>
 <223> Synthetic construct

<400> 749
 tttgtggaca ttgcctgttc ctccagccaca gcacccaaga tgattgtaga ctctgtttct 60
 gagaaaaaga ctatttccta ctggggctgt ataaactcaga tgtttacctt ccactttttt 120
 ggttggtgctg acatttttgt ttgactgtc atggcttttg atcgctatgc tgctatctgc 180
 caacccctcc gttacactgt catcatgagt gctaagtctt atactgtgct ggcatcactg 240
 tcttggttgg gggccctggg tcatctcttt gtccagaccc tctgacctt ccagctgccc 300
 ttctgtaatg ctccaggttat agaccattac ttttggtgatg tccaccagct cctaaaaactt 360
 gcctgtgctg atacaactct ggtaagtatg ttggtggttg ccaacagtgg tctcatctcc 420
 ctgggggtgtt tcttcattct tttggcctcc tacacagtca ttctgttttag tcttcaaaaa 480
 cagtctgcag agagctgaca caaagtcttc tctacctgtg gatctcatct gactatagta 540
 actttcttct ttgttccgtg tacctttatt tatctccatc cactactttc ccattggata 600
 aagctgtgctc tgtgttctat accaccatca cccca 635

<210> 750
 <211> 633
 <212> DNA
 <213> Unknown (H38g599 nucleotide)

<220>
 <223> Synthetic construct

<400> 750
 ttgttgatt tctgttattc caccacaatt acacccaaac tgctggagaa cttggttgcg 60
 gaagatagaa ctatctcctt cacaggatgc accatgcagt tattctttgt ctgcatattt 120
 gtagtaacag aaacatgcat gctggcagtg atggcctatg accgatatgt ggcggtgtgt 180
 accctcttct ctacacagtt gcaatgtacc agaggctttg ctccctgtta gtggctacat 240
 catactgctg ggggatagtc tgtccctga cacttaccta gtttctactg gagttatcct 300
 tcagaggaaa taatatcatt aataactttg tctgtgagca cgctgccatt gttgctgtgt 360
 cttgctctga cccctgtgtg agccagtaga tcactttagt ttctgccaca ttcaatgaaa 420
 taagcagcct gcttccatg ctttcatttt tatcactgtc atgaagacgg cttccactgg 480
 ggggcgcaag aaagcgttct ccacgtctgc ctccactga cggccattac cattttccat 540
 gggactatct ttttctctta ctgtgttctt aacgccaaaa gttcgtggct catggtcaag 600
 gtggcctctg gcttttacac agtgggtcatg ccc 633

<210> 751
 <211> 646
 <212> DNA
 <213> Unknown (H38g600 nucleotide)

<220>

<223> Synthetic construct

<400> 751

ttttagtagaca	tctgtgttac	ctccaccaca	gtcccaaaga	cactgtcaaa	catccggaca	60
cagagtaaag	tcatcaccta	tgcagggtgc	atcacccaga	tgtacttttt	tgtactcttt	120
atagtgttgg	acagcttact	cttgaccgtg	atggcctatg	accagtttgt	ggccatctgt	180
caccccctgc	actacacggt	catcgtgaac	cctcggctct	gtggactgct	ggttctggcg	240
tcttgatca	tgagtgcct	gaattccttg	atagaaagct	taatgggtgt	gccactgctc	300
ttttgtacag	acttgaaaat	ccccacttt	ttctgtgaac	ttaatcagat	aatccgcagt	360
gcctgttctg	acacctttct	taatgacatg	gtgatgtatt	tgtcagctgt	gcttctagggt	420
aggggatgtt	tactgggat	cctgtactct	tactttaaga	cagtttcctc	catacgtgca	480
atctcatcag	ctcaggggaa	gtacaaggca	ttttccacct	gtgcatcgca	cctctcagtt	540
gtctccttat	tttattgtat	gggccttggg	gtgtacctta	gtgctgctgc	aaccacaac	600
tcactctcaa	gtgcaacacg	ctctgatgta	cactgtgggc	accccc		646

<210> 752

<211> 342

<212> DNA

<213> Unknown (H38g601 nucleotide)

<220>

<223> Synthetic construct

<400> 752

atttgctttc	ctctccacta	tcccatccgt	atgagaaaaa	gagtgtgtgc	actgatgata	60
acaggatctt	ggatgatagg	ctccatcaac	tcttgtgtgc	acacgggata	tgcactccgt	120
atcccatatt	gcaagtccag	agccatcaat	cattttttct	gtgatgttcc	agctatgttg	180
accctagcct	gcacggatac	ctgggtctat	gagtgcacgg	tgtttttgag	caccaccatt	240
tttcttgtgt	ttcccttcat	ttgtattgca	tgttcctatg	gccggattct	ccttgctgtc	300
taccacatgc	actctgcaga	aggagggaag	aaggcctatt	cg		342

<210> 753

<211> 648

<212> DNA

<213> Unknown (H38g602 nucleotide)

<220>

<223> Synthetic construct

<400> 753

cttgtcgatg	tctcctatgc	cacaagtgtg	gtccctcagc	tgctggcaca	ttttcttgca	60
gaacataaag	ccatcccatt	ccagagctgt	gcagcccagt	tatttttctc	cctggccttg	120
ggtagggattg	agtttgttct	cctggcggtg	atgggctatg	accgctatgt	ggctgtgtgt	180
gatgccctgc	gatactcggc	catcatgcat	ggagggtgtg	gtgctagggt	ggccatcaca	240
tcttggtgca	gtggcttcat	cagctctcct	gtgcagactg	ctatcacctt	tcagctgcc	300
atgtgcagaa	acaagtttat	tgatcacata	tcctgtgaac	tcctagctgt	ggtcaggctg	360
gctcgtgtgg	acacctcctc	caatgaggtc	accatcatgg	tgtctagcat	tgttcttctg	420
atgacaccct	tctgacctgt	tcttttgtcc	tacatccaga	tcactccac	catcctaaag	480
atccagtcga	gagaaggaag	aaagaaagct	ttccacacgt	gtgacctca	cctcacagt	540
gttgacctgt	gctatggtgt	ggccattttc	acttacatcc	agccccactc	cagtcctctc	600
gtccttcagg	agaagttgtt	ctctgtcttt	tatgccattt	taacacca		648

<210> 754

<211> 635

<212> DNA

<213> Unknown (H38g603 nucleotide)

<220>

<223> Synthetic construct

<400> 754
 tttgtggaca ttgcctgttc ctcagccaca gcacccaaga tgattgaaga ctttgtttct 60
 gagaaaaaga ctatttccta ctggggctgt ataactcaga tgtttacctt ccactttttt 120
 gggtgtgctg agatttttgt cttgactgtc atggcttttg atcgctatgc tgctatctgc 180
 caacccctcc gttacactgt catcatgagt gctaagtctt atactgtgct ggcatactg 240
 tcctgggttg gggccctggg tcattccctt gtccagaccg tcctgacctt ccagctgccc 300
 ttctgtaatg ctcaggttat agaccattac ttttgtgatg tccaccagc cctaaaactt 360
 gcctgtgctg atacaactct ggtaaatatg ttgggtggtg ccaacagtgg tctcatctcc 420
 ctgggggtgt tcctcattct tttggcctcc tacacagtca ttctgtttag tcttcaaaaa 480
 cagctctcag agagctgaca caaagttctc tctacctgtg gatctcatct gactatagta 540
 actttcttct ttgttccgtg tatctttatt tatctccatc cactactttc ccattggata 600
 aagctgtgtc tgtgttctat accaccatca cccca 635

<210> 755

<211> 342

<212> DNA

<213> Unknown (H38g604 nucleotide)

<220>

<223> Synthetic construct

<400> 755
 atatgcaaac ctttacttta tccagccatt atgaccaatg gactgtgcat cgggctatta 60
 atcttgtcat atgtagggtg tcttcttcat gctttaatcc atgaaggatt tttattcaga 120
 ctaaccttct gtaactccaa catagtacat cacatttact gtgacattat cccattgtct 180
 aagatttctt gtactgattc ttctattaat tttctaattg tttttatttt ctcagggtca 240
 attcaggtat tcagcattgt gactattctt gtatcttata catttggtct cttcgcaatc 300
 ttaaaaagga aatctgataa aggtgtaagg aaagcctttt cc 342

<210> 756

<211> 333

<212> DNA

<213> Unknown (H38g605 nucleotide)

<220>

<223> Synthetic construct

<400> 756
 atttgtaacc ctctgagata ccccatcatc atgagcaggc acgtctgtgt gcagatggcc 60
 gccatctcct gggtagacagg ctgtctgact gctctgctgg taactagttg tgccctgcag 120
 atccccctct gtgggaatgt catcgaccat ttcacatgtg aaatccttgc agtgctaaaa 180
 ctagcttgtg tgagtccct gctcgtggac atgggtatgc tgggtggcag tattctcctg 240
 ctgcccaccc caatgctttt gatttgcac tcgtatggct tcaccccttc tacaattctg 300
 aggatcggct caacagaggg aagaaacaaa gct 333

<210> 757

<211> 665

<212> DNA

<213> Unknown (H38g606 nucleotide)

<220>

<223> Synthetic construct

<400> 757
 ttgcctgaca tcggtttcac ctccaccacg gtccccaaga tgattgtgga catccagtct 60
 cacagsagag tcactccta tgcaggctgc ctgactcaga tgtctctctt tgccatttkt 120
 ggaggcatgg aagagagaca tgctcctgag tgtgatggcc tatggccggg ttgtagccat 180
 ctgtcacccct ctatatcggt cagccatctt gaacccatgt ttctgtggct tcctagattt 240
 gttgtcttcg ttttgttttg ttttgttttt ctcagtcttt tagactccca gctgcacaac 300
 ttgattgcct tacaatgac cggcttcaag gatgtggaat tcctaatttc ttctgggaac 360

cttctcaact	ccccatcttg	catgttggtga	caccttcacc	aggaacatca	acctgtattt	420
ccctgctgcc	gtatttggtt	ttcttcccat	cttggggacc	ttttctctta	ctgtaaaatt	480
gtttcctcca	ttctgagggg	ttcatcatca	gggtgggaagt	ataaaccttc	tccacctgtg	540
gggtctcacct	gccagttggt	tgctgatttt	gtggaacagg	tggtggaggg	taccttggtt	600
cagatgtgtc	atcttcccca	agaaagagtg	cagtgccttc	agtgatgtac	ccggtggtca	660
cctcc						665

<210> 758

<211> 646

<212> DNA

<213> Unknown (H38g607 nucleotide)

<220>

<223> Synthetic construct

<400> 758

tttgtagaca	tctgtgttac	ctccaccaca	gtcccaaaga	caactgtcaaa	catccggaca	60
cagagtaaag	tcatacacta	tgagattgac	atcacccaga	tgtacttttt	tgtactcttt	120
atagtgttgg	acagcttact	cttgaccgtg	atggcctatg	accagtttgt	ggccatctgt	180
cacccctgc	actacacggg	catcgtgaac	cctcggtctt	gtggactgct	ggttctggcg	240
tcctggatca	tgagtgcctt	gaattccttg	atagaaagct	taatgggtgt	gccactgctc	300
ttttgtacag	acttgaaaat	ccccactttt	ttctgtgaac	ttaatcagat	aatccgcagt	360
gcctgttctg	acacctttct	taatgacatg	gtgatgtatt	tgtcagctgt	gcttctaggt	420
aggggatggt	tcaactggggt	cctgtactct	tactttaaga	cagtttcttc	catacgtgca	480
atctcatcag	ctcaggggaa	gtacaaggca	ttttccacct	gtgcacgca	cctctcagtt	540
gtctccttat	tttattgtat	gagccttggg	gtgtacctta	gtgctgctgc	aaccacaac	600
tcactctcaa	gtgcaacagc	ctctgatgta	caactgtggtc	accccc		646

<210> 759

<211> 834

<212> DNA

<213> Unknown (H38g608 nucleotide)

<220>

<223> Synthetic construct

<400> 759

atggcaatta	ggaaccattc	caccctccac	aaacccatgt	actttttttt	agctaatatg	60
tcctttctgg	agatttggtg	tgctactgtc	actattccca	agatgcttgc	tggttttgtt	120
ggatccaaac	aggatcatgg	acagctaata	tcctttgagg	gatgcatgac	acagctttac	180
tttttccctg	gcttgggctg	caactgagtg	gtccttctcg	ctgttatggc	caatgatcgc	240
tatatggcca	tctgctatct	tctccacaac	ccagtcattg	tcagtggccg	gctgtgtgtg	300
cagatggctg	ctggctcttg	ggctggaggt	tttggcatct	ccatgggtcaa	agtttttctt	360
atttcggggc	tctctaacgg	tggccccaac	atcatcaacc	actttttctg	tgatgtctct	420
ccattgctca	acctctcatg	caactgatatg	tccacagcag	agcttacaga	tttcatcctg	480
gccattttta	ttcttctagg	gccactctct	gtcactgggg	cctcctatgt	ggccattact	540
gggtgctgtg	tgacattccc	ttcggctgct	ggacgggtata	aggccttttc	cacctgtgcc	600
tctcatttca	atgtttgtgat	aattttttat	gcagccagta	tcttcattta	tgctcggcca	660
aaggcacttt	cagcttttga	caccaacaag	ttggtctctg	tactgtatgc	tgctcattgta	720
ccattgctca	atcccatcat	ttactgcctg	cgcaatcaag	agggtcaagag	agccctatgc	780
tgtattttgc	acctgtacca	gcaccaggat	cctgacccca	agaaaggtag	caga	834

<210> 760

<211> 942

<212> DNA

<213> Unknown (H38g609 nucleotide)

<220>

<223> Synthetic construct

<400> 760

atggaattta	cagatagaaa	ctacacgttg	gtcactgagt	ttattctatt	aggttttcca	60
actgcacctg	aactgcagat	tgtcctgttc	ctcatgtttc	tgacattgta	tgctataaatt	120
ctgataggga	acattggatt	gatgctgttg	atcaggattg	atcctcacct	tcaaaccctcc	180
atgtattttt	tccttagcaa	cctatcattt	gtagaccttt	gctatttctc	agacattggt	240
cccaaatg	tggtcaattt	cctctcggag	aacaaatcta	tttcctatta	tggtgtgccc	300
ctgcagtttt	attttttctg	tacttttgca	gatacagaat	ccttcaccc	ggccgccatg	360
gcctatgac	gctatgtcgc	catctgtaac	cctttattgt	acacagttgt	gatgtctagg	420
ggcatctgta	tgcggttgat	tgtcttgta	taccttgagg	gcaacatgag	ttccctgggt	480
cacacatcct	ttgcctttat	tctgaaatat	tgtgacaaaa	atgttattaa	tcattttttc	540
tgtgacctcc	ctccctgct	taaactatcc	tgactgaca	caacaattaa	tgagtggctc	600
ctctccacat	acggcagctc	agtggaaatc	atttgtttta	tcacatcat	catctcctac	660
tttttcatc	ttctctcagt	cttaaagatc	cgctctttca	gtgggaggaa	gaagaccttt	720
tctacatg	cctctcacct	gacttcagtg	acgatctacc	aagggaactc	cctctttatt	780
tactcacggc	ccagctacct	gtattctcca	aacactgata	aaattatctc	agtgttctac	840
accattttca	ttccagtgct	gaatccgttg	atttatagtt	tgagaaataa	agatgtaaag	900
gatgcagctg	agaaagttct	aagatcaaag	gtagattctt	ca		942

<210> 761

<211> 948

<212> DNA

<213> Unknown (H38g610 nucleotide)

<220>

<223> Synthetic construct

<400> 761

atggataacc	aaagctccac	accgggcttc	ctccttcttg	gcttctctga	acacccaggg	60
ctgggaagga	ctctcttcgt	ggatgtcatc	acttctacc	tcctaaccct	agtgggcaac	120
acactcatca	tctgtctg	tgcgctggac	accaagctcc	actctccaat	gtactttttc	180
ctctccaacc	tctccttctt	ggacctctgt	ttcaccacga	gttgtgttcc	ccaaatgctg	240
gccaacctct	ggggcccaaa	gaagaccatc	agcttctctg	actgctctgt	ccagatcttc	300
atcttctctg	ccctggggac	aactgagtg	atcctcatga	aagtgatggc	tttgatcgc	360
tacgtggctg	tctgccagcc	cctccactat	gccaccatca	tccaccccg	cctgtgctgg	420
cagctggcat	ctgtggcctg	ggtcattggg	ctagtgggg	cagtgggtcca	gacaccatcc	480
accctgcacc	tgcccttctg	ccccgatcgg	cagggtggatg	attttgtctg	tgagggtcca	540
gctctaattc	gactctcctg	tgaagacacc	tcctacaatg	agatccaggt	ggctgttgcc	600
agtgtcttca	tcttggttg	gcctctcagc	ctcctcttg	tctcttacgg	agccattacc	660
tgggcagtg	tgaggattaa	ctccgccaca	gcatggagaa	aggcctttgg	gacctgtctc	720
tcccattctca	ctgtgggtcac	cctcttctac	agctcagtc	ttgtgtctca	cctccagccc	780
aaaaatccgt	atgcccgaag	gaggggcaag	ttctttggtc	tcttctatgc	agtgggcact	840
ccttcactta	accctctcgt	atacaccctg	aggaacaagg	agataaagcg	agcactcagg	900
aggttactag	ggaaggaaag	agactccagg	gaaagctgga	gagctgct		948

<210> 762

<211> 927

<212> DNA

<213> Unknown (H38g611 nucleotide)

<220>

<223> Synthetic construct

<400> 762

atgaaaagag	agaactttac	tctcatcact	gactttgttt	tccaagggtt	ctctagcttc	60
catgagcagc	agatcacctt	ttttggcgtg	ttccttgca	tatacatctt	aaccttagca	120
ggcaatatca	tcattgtgac	catcatccga	attgatcttc	atcttcacac	acctatgtac	180
ttcttctctg	gcatgctg	cacttcagag	actgtatata	cattgggtcat	tctcccaaga	240
atgctctcca	gcctcgtagg	tatgagccag	cccatgtcat	tggcagggtg	tgccacacag	300
atgttctttt	ttgtaacctt	tggtacact	aactgcttcc	tgctcacagc	aatgggatat	360
gaccgctatg	tgcccatctg	caacccctg	agatacatgg	ttattatgaa	caagaggctg	420
cgtatccaac	ttgtcctggg	ggcctgcagc	attgggctga	ttgtagcaat	aacgcaagtg	480
acatctgtat	tcagggttacc	cttctgtgct	agaaaggtgc	cccacttctt	ctgtgacatc	540

cgccctgtga	tgaagctctc	ctgcattgac	accactgtca	atgaaatcct	gactttgatt	600
atcagtgtgc	tgggtcctgt	tgtacctatg	ggtctggttt	tcattttctta	tgttctcatt	660
atctctacaa	tcctcaagat	tgcttcagtt	gagggccgga	agaaggcttt	tgccacctgt	720
gcateccacc	tactgtgggt	cattgtccac	tacagctgtg	cctccattgc	ctacctcaag	780
cccaagtcag	agaacaccag	agaacatgac	cagctgatct	cggtgacct	caactgtcatc	840
actccctac	tgaaccctgt	ggtatacacc	ctgagaaata	aagagggtcaa	agatgctctg	900
tgcagggctg	ttggtgggaa	gttttcc				927

<210> 763

<211> 650

<212> DNA

<213> Unknown (H38g612 nucleotide)

<220>

<223> Synthetic construct

<400> 763

tgggctgaca	tcggtttcac	ctcgccacg	gctcccaaga	tgattgtgga	catgcagtcg	60
cataggagag	ccatctctca	tgcgggctgt	ctgacgcaga	tgtctttctt	gttcctttgt	120
gcatgtgtag	aaggcatgct	cctgactgtg	atggcctatg	actgctttgt	agacatctgt	180
cgccctctgc	actaccag	catcggaat	cctcacttct	gtgtcttctt	cgtgggggtg	240
tcctttctcc	ttagcctgtg	ggattcccag	ctgcacagtt	ggattgtgtt	acaatatcac	300
catcttcaag	aatgtggaaa	tctctaattt	tgctgtgac	ccctctcaac	ttctcaaact	360
tgcctgttct	gacggcgta	tcaatagcat	attcatatat	tttgatagta	ctatgtttgg	420
tttcttccc	atttcaggga	tcctatgggc	ttactataaa	atcgctccc	ccattctaag	480
gatttcatcg	tcagatggga	agtataaagc	cttctccacc	tggtggctcct	caccaggcag	540
ttgtttgctg	attttataga	acaggcattg	gcatgtacct	gacttcagct	gtgtcaccac	600
ccccaggaa	tggtgtggtg	gcacattga	tatacgctct	tgctactccc		650

<210> 764

<211> 641

<212> DNA

<213> Unknown (H38g613 nucleotide)

<220>

<223> Synthetic construct

<400> 764

ttcactgacc	tcttctttgt	caccaacaca	atccccaaga	tgctgggtgaa	cctccagtc	60
cagaacaaag	ccatctccta	cacaggggtg	ctgacacagc	tctacttcct	ggtctccttg	120
gtggccctgg	acaacctcaa	cctggccgtg	atggcgatg	atcgctatgt	ggccatctgc	180
cgtccccctcc	actatgtcac	agccatgac	cctgggctct	gtatcttgct	cctctccttg	240
tgttgggtgt	tctctgccct	ctatggcctc	atccatatcc	tcctcatgac	cagggtgacct	300
tctgtgggtc	tcaaaagatc	cactacctct	tctgtgagat	gtacttcctg	ctaaggctgg	360
catgttccaa	catccacgtc	aaccacacag	tactggttgc	cacgggctgc	ttcatcttcc	420
tcacccctt	aggcttcatg	atcacatcca	acgcccgc	tgctcagagcc	atcctccaaa	480
taccctcagc	cactgggaag	tacaaagcct	tctccacctg	tgcttcccat	ttggctgtgg	540
tctccctctt	ctatgggact	ctgggtatgg	tgtacctgca	gccccctcaa	acctactcca	600
tgaaggactc	agtagccaca	gtgatgcatg	cgggtggtgac	g		641

<210> 765

<211> 635

<212> DNA

<213> Unknown (H38g614 nucleotide)

<220>

<223> Synthetic construct

<400> 765

tttgttgatt	tctgttattc	caccacaatt	acacccaaac	tgctggagaa	cttgggtgtg	60
gaagatagaa	ctatctcctt	cacaggatgc	accatgcagt	tattctttgt	ctgcatattt	120

gtagtaacag	aaacattcat	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtg	180
aacctcttc	tctacacagt	tgcaatgtac	cagaggcttt	gctccttggt	agtgggtaca	240
tcatactggt	gggggatagt	ctgttccctg	acacttacct	agtttctact	ggaattatcc	300
ttcagaggaa	ataatatcat	taataacttt	gtctgtgagc	acgctgccat	tgttgctgtg	360
tcttgctctg	acctctgtgt	gagccaggag	atcactttag	tttctgccac	attcagtgaa	420
ataagcagcc	tgcttcctat	gctttcattt	ttatcactgt	catgaagacg	ccttccactg	480
ggggggcgaa	gaaagcggtc	tccacgtctg	cctcccactt	gacggccatt	accattttcc	540
atgggactat	ccttttcctc	tactgtgttc	ctaactccaa	aagttcgtgg	ctcatggtca	600
aggtggcctc	tgtcttttac	acagtgggtca	ttccc			635

<210> 766

<211> 635

<212> DNA

<213> Unknown (H38g615 nucleotide)

<220>

<223> Synthetic construct

<400> 766

ttagttgatt	tctgttattc	caccacaatt	acacccaagc	tgttgaggaa	cttggttgtg	60
gaagatagaa	ctatctcctt	cacaggatgc	accatgcagt	tattctttgt	ctgcatattt	120
gtagtaacag	aaacattcgt	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtg	180
aacctcttc	tctacacagt	tgcaatgtac	cagaggcttt	gctccttggt	agtgggtaca	240
tcatactggt	gggggatagt	ctgttccctg	acacttacct	agtttctact	ggaattatcc	300
ttcagaggaa	ataatatcat	taataacttt	gtctgtgagc	acgctgccat	tgttgctgtg	360
tcttgctctg	acctctgtgt	gagccaggag	atcactttag	tttctgccac	attcaatgaa	420
ataagcagcc	tgcttcctat	gctttcattt	ttatcactgt	catgaggacg	ccttccactg	480
ggggggcgaa	gaaagcggtc	tccacgtctg	cctcccactt	gacggccatt	accattttcc	540
atgggactat	ccttttcctc	tactgtgttc	ctaactccaa	gagttcgtgg	ctcatggtca	600
aggtggcctc	tgtcttttac	acagtgggtca	ttccc			635

<210> 767

<211> 936

<212> DNA

<213> Unknown (H38g616 nucleotide)

<220>

<223> Synthetic construct

<400> 767

atgtccattt	ccaacatcac	agtctacatg	ccctctgtgt	tgacactagt	agggatccca	60
ggcctagaat	ctgtgcagtg	ctggattggg	attccattct	gtgccattta	tctcattgct	120
atgattggaa	attccttgct	tctgagcatc	atcaaactctg	agcgcagctc	ccatgagccc	180
ttgtacattt	tcttaggcat	gctaggagcc	acagacattg	cacttgctag	cagcattatg	240
ccaaagatgc	ttggaatatt	ctggtttaat	gtgcctgaaa	tctattttga	ttcctgcttg	300
cttcaaatgt	ggttcatcca	cacattgcag	ggtatagagt	caggcatcct	tgtggccatg	360
gccctggacc	gttatgtggc	catctgttat	ccactaagac	atgccaacat	cttcacccac	420
cagcttgcca	ttcagatagg	aactatggtc	gtactcaggg	ctgctattct	tgtagcccca	480
tgccctagta	tgataaagtg	ccggtttcaa	ttttatcaca	caacagtcac	ctcccactcc	540
tactgtgagc	atatggccat	tgtgaaacta	gcagcagcaa	atgttcaagt	caacaaaatc	600
tatgggtttg	ttgtggcctt	cactgtagca	ggatttgacc	tcacattcat	cacattgtcc	660
tacatccaga	tatttatcac	agtttttcgt	ttgccccaga	aggaggctag	gtttaaagca	720
ttcaatacct	gcattgctca	catctgtgtc	ttcctccagt	tctacctcct	tgccctcttc	780
tccttcttca	cacatagggt	tgggtctcac	atccccctt	atatccatat	tctcttttct	840
agcatttact	tgtgtgtccc	tccatttctc	aatccacttg	tctatggtgc	aaagaccaca	900
cagattcgca	ttcatgtggt	aaaaatgttc	tgttca			936

<210> 768

<211> 954

<212> DNA

<213> Unknown (H38g617 nucleotide)

<220>

<223> Synthetic construct

<400> 768

atgtggcaga	agaatcagac	ctctctggca	gacttcaccc	ttgaggggct	cttcgatgac	60
tcccttacc	accttttct	tttctccttg	accatgggtg	tcttccttat	tgcggtgagt	120
ggcaacaccc	tcaccattct	cctcatctgc	attgatcccc	agcttcatac	accaatgtat	180
ttcctgctca	gccagctctc	cctcatggat	ctgatgcatg	tctccacaat	catcctgaag	240
atggctacca	actacctatc	tggaagaaa	tctatctcct	ttgtgggctg	tgcaaccag	300
cacttcctct	atttgtgtct	aggtgggtgt	gaatgttttc	tcttagctgt	catgtcctat	360
gaccgctatg	ttgccatctg	tcatccactg	cgctatgctg	tgctcatgaa	caagaagggtg	420
ggactgatga	tggctgtcat	gtcatgggtg	ggggcatccg	tgaactccct	aattcacatg	480
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ggctcccacc	tcacgggtgt	ttctcttttg	tttgggtgct	gcactctctc	ctacatgaga	780
cccaggtccc	agtgcactct	attgcagaac	aaagtgggtt	ctgtgttcta	cagcatcatt	840
acgcccacat	tgaattctct	gatttatact	ctccggaata	aagatgtagc	taaggctctg	900
agaagagtgc	tgaggagaga	tgttatcacc	cagtgcattc	aacgactgca	attg	954

<210> 769

<211> 881

<212> DNA

<213> Unknown (H38g618 nucleotide)

<220>

<223> Synthetic construct

<400> 769

gccacgtaca	attccagcaa	tactgtgggtg	acagagtttg	tgtttctgag	cttcccagag	60
ctgcaccatc	ttcaagggct	gctatttggt	cactcctcat	catctatgtg	gtgaccatcc	120
tagaggacct	ggctgtcgtg	gggaccatca	gagccagcca	ccacctgcac	atatccacac	180
acctcttctt	ggccaaactc	tcggtgctgg	agactctgta	cacctcggtc	accgtcccaa	240
agctgttggc	cggactccca	gcacgagcga	cgaccatcta	tctccttctc	ggggcacctc	300
acctggctgc	tcctcttctt	ctcactcagc	tcctctgagt	gcgtcctccc	ggccaacatg	360
gactgtgact	ggcaccagct	catctgccac	ctgctgcact	acccagccca	tcatggactc	420
catgcagctg	gctctgcctg	cacctggcca	tcagcgccca	gctcagcagc	ttcccagcct	480
cctttgtgtc	cacggctctc	aactccagcc	tgaggctccg	cagccccgat	gtcctcaacc	540
acttctgtga	tatcccaccc	ccgctagggc	tctcttgctc	cagcaccact	accatagaaa	600
tgcggaactca	ggcagcccag	gtgatccttg	cggcttccct	gcaggcaacc	acggtctcct	660
acacccacat	cctggccaga	tcgctgagga	ttccagaaa	gcccagcagc	taaaggcctt	720
ccccacctat	gcctcccacc	tgggggtggc	gctcctctaa	cctcatcaag	ctgggtgttca	780
gggggtctact	tggttgggat	ccctctgctc	aaacccatca	tctactgcct	gggaactgca	840
acatcaggga	ggccctggcc	aaactcctcc	aggcccttcc	c		881

<210> 770

<211> 880

<212> DNA

<213> Unknown (H38g619 nucleotide)

<220>

<223> Synthetic construct

<400> 770

gccacatata	attccagcaa	tactgtgggtg	acagagtttg	tctttctgag	cttcccagag	60
ctgcgccatc	ttcaagggct	gctatttggt	cactcctcat	catctatgtg	gtgaccatcc	120
tagaggacct	ggctgtcgtg	gggaccatca	gagccagcca	ccacctgcac	atatccacac	180
acctcttctt	ggccaaactc	tcggtgctgg	agacctgta	cacctcggtc	accgtcccaa	240
agctgttggc	cggactccca	gcacgagcga	cgaccatcta	tctccttctc	ggggcacctc	300

acctggctgc	tctcttct	ctcactcagc	tctcttgagt	gcatacctccc	ggccaacatg	360
gactgtgact	ggcaccggg	catctgccac	ctgctgcaat	acccagccca	tcatggactc	420
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cctttgtgtc	cacggctctc	aactccagcc	tgaggctccg	cagcccgat	gtcctcaacc	540
acttctgtga	tatcccaccc	ccgctagggc	tctcttgctc	cagcaccact	accatagaaa	600
tgcggactca	ggcagccag	gtgatccttg	cggcttccct	gcaggcaacc	acggtctcct	660
acaccacat	cctggccaga	tcgctgagga	ttccagaaa	gcccagcagc	taaaggcctt	720
ccccacctat	gcctcccacc	tgggggtggcg	gctcctctaa	cctcatcaag	ctggtgtcag	780
gggtctactt	ggttgggac	cctctgctca	aacctatcat	ctactgcctg	ggaactgcaa	840
catcagggag	gccctggcca	aactcctcca	ggccttcccc			880

<210> 771

<211> 524

<212> DNA

<213> Unknown (H38g620 nucleotide)

<220>

<223> Synthetic construct

<400> 771

ctcctaattg	cagcagacaa	ccacacagcg	tagaggcggt	tgtcctgcag	ggtttctctg	60
aagaccttcc	actccagggc	tgctgctttg	cttttttcc	cctttacctg	atggcacttg	120
taggaaacat	cctcatggc	atggccatca	gtctgaatcc	aggcctccac	acgccagtgt	180
acttctttct	caccaacctg	gcccttttag	acatcgtctg	cacatccatg	gacaacagca	240
gagtgggtggc	tgtgctgtac	acagtgggtca	gccccaccct	gaacctctca	cctactccct	300
gcggaacaag	gacttatcag	tagcactgag	gagagtgttt	tcttgcatca	ggtaaaagga	360
aggggaagttt	ctagtgtgaa	atgttccagg	tgttaacaaa	ctaatttcaa	catatgactt	420
tgagaatctc	atgcaagcag	caagggaacaa	gaaagtaatt	aatgccacat	atttataaat	480
aatgtgctcc	cgcacggggc	tgccatcatt	caatgtggaa	ctcc		524

<210> 772

<211> 951

<212> DNA

<213> Unknown (H38g621 nucleotide)

<220>

<223> Synthetic construct

<400> 772

atggaaagga	ccaacgatcc	cacgtcgaca	gaatttttcc	tggtaggggt	ttctgcccac	60
ccaaagctcc	agacagtttt	cttcgttcta	attttgtgga	tgtacctgat	gatactgctt	120
ggaaatggag	tccttatctc	agttatcatc	tttgattctc	acctgcacac	ccccatgtat	180
ttcttcctct	gtaatcttcc	cttctctgac	gtttgctaca	caagtctctc	tgtcccacta	240
attcttgcca	gctttctggc	agtaaaagaaa	aaggtttcc	tctctgggtg	tatgggtgcaa	300
atgtttattt	cttttgccat	ggggggccag	gagtgcata	tcttaggcac	gatggcactg	360
gaccgctatg	tggccatctg	ctaccctctg	agataccctg	tcatactgag	caagggtgcc	420
tatgtggcca	tggcagctgg	gtcctgggtc	actgggcttg	tggactcagt	agtgcagaca	480
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attgttgcca	ctattctgag	gattccttcc	actgaaggaa	aacataaggc	cttctccacc	720
tgctcagccc	acctgacagt	ggtgattata	ttctatggaa	ccatcttctt	catgtacgca	780
aagcctgagt	ctaaagcctc	tgttgattca	ggtaatgaag	acatcattga	ggccctcatc	840
tcctttttct	atggagtgat	gactcccatg	cttaatcctc	tcatactatg	tctgcgaaac	900
aaggatgtaa	aggctgctgt	caaaaacata	ctgtgttagga	aaaacttttc	t	951

<210> 773

<211> 954

<212> DNA

<213> Unknown (H38g622 nucleotide)

<220>

<223> Synthetic construct

<400> 773

atggaatggg	aaaaccaaac	cattctggtg	gaattttttc	tgaagggaca	ttctgttcac	60
ccaaggcttg	agttactctt	ttttgtgcta	atcttcataa	tgtatgtggt	catccttctg	120
gggaatggta	ctctcatttt	aatcagcatc	ttggaccctc	accttcacac	ccctatgtac	180
ttctttctgg	ggaacctctc	cttcttggac	atctgtctaca	ccaccacctc	tattccctcc	240
acactagtga	gcttcctttc	agaaagaaaag	accatttcct	ttctgggctg	tgcagtgcag	300
atgttccttg	gcttggccat	ggggacaaca	gagtgtgtgc	ttctgggcat	gatggccttt	360
gaccgctatg	tggctatctg	caaccctctg	agatatccca	tcacatgatg	caagaatgcc	420
tatgtaccca	tggtgtgttg	gtcctggttt	gcagggttg	tcaactctgc	agtacaaact	480
acattttag	tacaattgcc	tttctgcagg	aagaatgtca	tcaatcattt	ctcatgtgaa	540
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gtggccacaa	tattgttcac	attgatgcc	ctgctcttga	tagttatctc	ttactcatta	660
atcatttcca	gcatectcaa	gattcactcc	tctgagggga	gaagcaaage	tttctctacc	720
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tccatgttct	atgggtgat	gactcccatg	atgaatcctt	taatctacag	tcttagaaac	900
aaggatgtga	aagaggcagt	aaaacaccta	ccgaacagaa	ggttcttttag	caag	954

<210> 774

<211> 369

<212> DNA

<213> Unknown (H38g623 nucleotide)

<220>

<223> Synthetic construct

<400> 774

ttctctcttt	aggccaacta	cagcgcgagag	gagcgctttc	tcctgctggg	tttctccgac	60
tggccttccc	tgcagccggt	cctcttcgcc	cttgctctcc	tgtgctacct	cctgaccttg	120
acgggcaact	cggcgctggg	gctgctggcg	ggcgaccgcg	cgcctgcaca	cgcccatgta	180
ctacttcttc	tccacctggc	cttggttagac	gcgggcttca	ctactagcgt	ggtgcccgcg	240
ctgctggcca	acctggcgga	ccagcgctct	cgtgcgcgca	gccactgcac	ggcccagctg	300
tgcgcatcgc	tggctctggg	ttccgcccga	tgcgtccatc	tggcggtgat	ggctctgggc	360
cgcgcggtc						369

<210> 775

<211> 945

<212> DNA

<213> Unknown (H38g624 nucleotide)

<220>

<223> Synthetic construct

<400> 775

atgagacaga	ataacaatat	tacagaattt	gtcctcctgg	gcttttctca	ggatcctggg	60
gtgcaaaaag	cattatttgt	catgttttta	ctcacatact	tggtgacagt	ggtggggaac	120
ctgctcattg	tggtggatat	tattgccagc	ccttccttgg	gttccccaat	gtatttcttc	180
cttgccctgcc	tgtcatttat	agatgctgca	tattccacta	ccatttctcc	caagttaatt	240
gtaggcttat	tctgtgataa	aaagactatt	tccttccaag	ggtgcatggg	ccagctattt	300
atagaccatt	tctttgggtg	ggctgaggtc	ttccttctgg	tggtgatggc	ctgtgatcgc	360
tatgtggcca	tctgtaagcc	actgcactat	ttgaccatca	tgaatcgaca	ggtttgcttc	420
cttctgttgg	tggtggccat	gattggaggt	ttgttacatt	ctgcgtttca	aattgttgtg	480
tacagtctcc	ctttctgtgg	tcccaatgtc	attgttcatt	tcagttgtga	catgcacca	540
ttactggaac	tgcatgcac	tgacacctac	tttataggcc	tcactgttgt	tgtcaatagt	600
ggagcaatct	gtatggatcat	tttcaacctt	ctgttaactc	cctatggagt	catcctaage	660
tcccttaaaa	cttacagtca	ggaaaagagg	ggtaaagcct	tgtctacctg	cagctccggc	720
agtaccgttg	ttgtcctctt	ttttgtaccc	tgtattttca	tatatgttag	acctgtttca	780
aactttccta	ctgataagtt	catgactgtg	ttttatacca	ttatcacaca	catgctgagt	840

cctttaatat atacgttgag aaattcagag atgagaaatg ctatagaaaa actcttgggt 900
 aaaaagttaa ctatatttat tataggagga gtgtccgtcc tcatg 945

<210> 776

<211> 352

<212> DNA

<213> Unknown (H38g625 nucleotide)

<220>

<223> Synthetic construct

<400> 776

cgctgtgagc	cccgcctgct	ggaccacttc	atctgtgagc	tgccggcggt	gctcaagctg	60
gcctgcggag	gcgacggaga	cactaccgag	aaccagatgt	tcgccgccc	cgtgggtcatc	120
ctgctgctgc	cgtttgccgt	catectggcc	tcctacgggt	ccgtggccc	agactgtctg	180
ttgcatgcgg	ttcagcggag	gccggcagag	aggcgggtgg	cacgtgtggg	tcccacctga	240
cagccgtctg	cctgttctac	ggctcggcca	tctacaccta	cctgcagccc	gcgagcata	300
caaccaggca	cggggcaagt	tcgtatcgct	cttctacacc	gtggtcacac	ct	352

<210> 777

<211> 937

<212> DNA

<213> Unknown (H38g626 nucleotide)

<220>

<223> Synthetic construct

<400> 777

ggactgagta	ataatgttac	agaatttgtc	ctcttgggca	acactcagtg	tcctgatgtg	60
caaaatgcat	tatttgcac	ggttttactc	acatacgttg	tgagtatggc	gggaaacttg	120
cttgtctgtg	tggctattat	ttccagccct	tcctttggct	ccccaatgta	cttcttcttc	180
acagcctgtt	atztatatat	gctgcatatt	ccaataccat	ttctccaaa	tgattatag	240
gcttactcca	tgataaaaag	actattttct	tcacagcatg	catggggcag	ctatttatag	300
accacttatt	tgggtgtgct	gaggtcttcc	tacttgtggg	gatgtcctac	gatttctatg	360
tggccatctc	taagccactg	cactatttga	ccatcatgaa	tcaacagggt	tgtatccttc	420
tggttgggtg	ggctgtgact	ggagggtttg	tgagtgtgtg	gtttcaaatt	gttgttgtgt	480
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attggaactg	gtttgcactg	atacctactt	tataggcttc	actgttgttg	ccaatggctc	600
agcaatctgt	atggtcgtct	tcacccttct	actaatctcc	tatggagtca	tcctaaacaa	660
ctttaaaact	tatagtcagg	aagggaggct	taaagccctg	tctgcctgca	tctcctacat	720
aacagtcact	gtcctgtttc	ttgttccctg	tattttcctt	ttcgtagac	ctgtttcgaa	780
ctttcctatt	gataaattca	tgactgtgtt	ttatacagtt	atcatacaca	tgttgaatcc	840
attaatatac	acactgagaa	atttagagat	gagaattgct	gtaaaatcca	atgtaaaaaa	900
actctggcat	taaaaactta	actatagtta	gaatgag			937

<210> 778

<211> 970

<212> DNA

<213> Unknown (H38g627 nucleotide)

<220>

<223> Synthetic construct

<400> 778

atgagactga	gtagcgatgt	tacagcattt	gtcctcctag	gccttactca	ggatcctgat	60
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ctgcccattg	tggtagctat	tattgccacc	cccaccttag	gtcctccagt	gtacttcttc	180
attgtctgct	tgctatttat	agatgtttg	tattccacca	ccattcctcc	caaattgatt	240
gtaagctatc	tccatgataa	aaagactatt	tccttccgag	cttgcattgg	tcagcccttt	300
tatagaccac	ttagtgggtg	gtgctgaggc	cttcattctg	ttgggtgatg	cctataatcg	360
ctatgtagcc	atctgtaagc	cactgcacta	tttcaccatc	atgaattgac	aggtttgcat	420

ccttctgttg	gtgggtggctg	tactgcggg	ttttgtgcat	tctgtgttcc	aaatttttagt	480
tgcgtacagt	ctccttttct	gtggtcccaa	tatcattgac	cactttttct	gtgacatgta	540
cccattattg	gaactggcac	acactgacac	ctactttata	ggcctcactg	ttgttgccaa	600
tggtggagga	atctgtatgg	tcttgttcat	ccttctacta	atctcctgtg	gggtcatcct	660
aatctccctt	aaaacttata	gtcaggaagg	gaggcataaa	gccctgtcta	cctgcagctc	720
ccacattacc	gtgggtgtcc	tgttttttgt	tccctgtatt	ttcctgtatg	ttagacctgt	780
ttcaaacttt	cctattaata	aattcattac	tgtgttttat	acagttatca	cacccatggt	840
gaatccatta	atatacacat	tgagaaactg	agagatgaaa	aatgctatag	gaaacctctg	900
gtgtaaatat	taactctaga	tagaataaga	gggtacattt	tcatgtaggt	acagggtaat	960
gcaggtaaag						970

<210> 779

<211> 704

<212> DNA

<213> Unknown (H38g628 nucleotide)

<220>

<223> Synthetic construct

<400> 779

cccatgtact	tggtccctcg	caatttgtcc	ttcattgac	tctgttattc	atttgtcttt	60
acccccaaaa	tgctgatgag	ctttatttca	gagaggaaca	tcattctcct	tccaggatgc	120
ataactcagc	tctttttctt	ctgctttttt	gtccactctg	agtgtctatg	gctgacagcc	180
atggcctatg	atcgctatgt	ggccatctgc	aaaccccttc	tgtacatggg	caccacgtcc	240
ctcagatctg	ttctctactg	atgcttgggt	catatgtgat	ggggtttgct	ggggccatgg	300
tccacacaga	gtgtatgatg	aagctcatct	tttgtgactc	caacgtcatc	aaccataaca	360
tgtgtgacat	cttccctactg	ctccagctct	cctgcagcag	cacctaggcc	aatgagctgg	420
tgatgtctgt	tattgttaggc	acagttgtta	tagtatcaag	cctcattatc	ttaattctct	480
atgctttgat	tcttttcaat	atccttcaca	tgctcctcagc	cgagggttgg	ttcaaagcca	540
tgggtacctg	tggctccccc	ataataactg	ttggcctatt	ctatgaattt	gggctgatca	600
ctcatgttaa	gttatcatct	gatttggata	tgggtcaggg	gaagtttctc	tcagtgtttt	660
atacaaatgt	ggttccccatg	ctgaacccct	tcattctactg	tctg		704

<210> 780

<211> 924

<212> DNA

<213> Unknown (H38g629 nucleotide)

<220>

<223> Synthetic construct

<400> 780

atgaggcaga	ataacaatat	tacagaattt	gtcctcctgg	gcttctctca	gtatcctgat	60
gtgcaaaatg	cattattttgt	catgttttta	ctcatatata	ttgtgactat	ggtggggaac	120
ctgctcattg	tggtgtctat	tattgccagt	cccttttttg	gctccccagt	gtacttcttc	180
cttgccctgcc	tgctcatttat	agatgctgtg	tattccacca	ccatttctcc	tgtattgatt	240
gtagacttac	tctgtgataa	aaagactatt	tccttcccag	cttgcattggg	tcagctattt	300
atagagcact	tgtttgggtga	tactgacgtc	ttccttctgg	tggtgatggc	ctatgatcgc	360
tacgtggcca	cctgtaagcc	actgcgctat	ttgacctaca	tgaattgaca	ggtttgcatc	420
cttctgttgg	tggtggctgt	gactggaggt	tttctgcatt	ctgtgtttca	aatttttagt	480
gtgtacagtc	tccctttctg	tggccccaat	gtcatttatc	actttttctg	taacatatac	540
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cactttatca	tggttatctt	gttttttggg	ccctgtattt	tcttatatgt	tagaccggtt	780
tcaaactttc	ctattgataa	attcctgact	gtgttttatt	cagttatcac	acccaagttg	840
aatcctttta	tatacatggt	gagaaattca	gagatgagaa	atgctataga	aaatctcttg	900
ggataccaaa	gtgggaagac	agga				924

<210> 781

<211> 690

<212> DNA

<213> Unknown (H38g630 nucleotide)

<220>

<223> Synthetic construct

<400> 781

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ccccatgtact tgttcctcgc caacttgctc ttgcctgaca tcggtttcac ctccagcatg      60
gtccccaaga tgattgtgga catctaactc cacagcagac tcattctccta ggcaggctgc      120
ctgactccca tgtctctctt tgccattttt ggaggcatgg aagagagaca tgctcctgag      180
tgtgatccct atgaccgcgt tgtagccatc tgtcaccttc tatatcattc agccatcatg      240
aaccgcgtgt tctgtggctt tctagttttg ttgtcttttt tttctcagtc tcttttagac      300
gcccagggtgc acaacttgat tgccttataa atgacctgct tcaaggatgt ggaaattcct      360
aatttcttct gggaaccttc tcaactcccc catcttgcat gtgcgacac cttcaccaat      420
aacataatca tgtattcccc tgctgccata tttgggtttt tccccatctc ggggaccctt      480
ttctcttact ataagattgt ttcttcattt cggagggttt catcatcagg tgggaagtat      540
aaggcctgct ccacctgtgg gtctcacctg tcagttgttt gctgatttta tgggaacaggc      600
ttttgggggt acctcagttc agatgtgtca tcttccccgg gaaaggctgc agtggcctca      660
gtgatgtaca cggtggtcac ccccatgctg

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<210> 782

<211> 681

<212> DNA

<213> Unknown (H38g632 nucleotide)

<220>

<223> Synthetic construct

<400> 782

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tctttcctgg agattggctt caacctagtc attgtgcccc aaatgctggg gacctgctt      60
gcccaggaca caaccatctc ctcccttggc tgtgccactc agatgtattt cttcttcttc      120
tttggggtag ctgaatgctt cctcctggct accatggcat atgaccgcta tgtggccatc      180
tgcagtcctt tgcactacct agtcatcatg aaccaaagga cacgggcca actggctgct      240
gcttctctgg tcccaggctt tctgtagct actgtgcaga ccacatggct cttcagtttt      300
ccattctgtg gcaccaacaa ggtgaaccac ttcttctgtg acagcccgcc tgtgctgaag      360
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gttgctcttc ttttctatat atcattaagc ctcacgtact tccggcctaa atcaaataat      600
tcacctgagg gcaagaagct gctatcattg tcgtacactg ttatgactcc catgctgaac      660
ccctttctac tactgtcctg g

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<210> 783

<211> 576

<212> DNA

<213> Unknown (H38g633 nucleotide)

<220>

<223> Synthetic construct

<400> 783

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atggtcacag agttcctcct actgggattt ctccctgggc caaggattca gatgctcctc      60
tttgggctct tctccctgtt ctatgtcttc accctgctgg ggaatgggac catcctgggg      120
ctcatctcac tggactccag actccacacc cccatgtact tcttctcttc acacctggcg      180
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ccagccaagc ccattctcct tgcggggcgc atgatgcaga cctttctgtt ttccactttt      300
gctgtcacag aatgtctcct cctgggtggt atgtcctatg atctgtacgt ggccatctgc      360
caccctctcc gatatttcct catcatgacc tggaaagtct gcatacctc ggccatcact      420
tctggacat gtggctccct cctggctatg gtccatgtga gcctcctcct aagactgccc      480
ttttgtgggc ctggtgaaat caaccactty ytctgtgaaa tcttckctgt cctcaggctg      540
ggctgtgctg atacctggct caaccagggt gtcac

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<210> 784
 <211> 924
 <212> DNA
 <213> Unknown (H38g634 nucleotide)

<220>
 <223> Synthetic construct

<400> 784
 tatgcagacc cacagaatct aacagatgtc tcwatattcc tcstcctaga actctcagag 60
 gatccagaac tgcagccagt ccttgctggg ctgttcctgt ccatgtgcct ggtcacgggtg 120
 ctgggggaacc tgctcatcat cctggccatc agccctgact cccacctcca caccctcatg 180
 tacttcttcc tctccaacct gtcttgccct gacatcggtt tcacctccac cagggtcccc 240
 aagatgattg tggacatcca gtctcacagc agagtcattc cctatgcagg ctgacctgact 300
 cagatgtctc tctttgccat ttttgaggc atggaagaga gacatgtctc tgagtgtgat 360
 ggcctatgac tggttttagt ccatctgtca cccgctatat cattcaccat catgaacccg 420
 tgtttctgtg cctttctagt tttgttctc ttttttttct cagtcttcta gactcccagc 480
 tgcacaactt gattgcctta caagtgcctt gcttcaagga tgtggaaatt cctaatttct 540
 tctgtgacct ttctcaactc ccccatcttg catgttgtga caccctcacc aataacataa 600
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 tctccacctg tgggtctcac ctgtcagttg tttgctgatt ttatggaaga ggtgttggag 780
 ggtacctcag ttcagatgtg tcatcttccc ccagaaaggg tgcagtggcc tgcagtgatg 840
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 aaaagtgtct tgcggcggcc gcaa 924

<210> 785
 <211> 714
 <212> DNA
 <213> Unknown (H38g635 nucleotide)

<220>
 <223> Synthetic construct

<400> 785
 atgtacttgt tcttgaggaa tctgtccttg cctgacatcg gtttcacctc caccattgtc 60
 cccaagatga ttgtggacat ccagttctac agcagagtga tctcctatgc aggccgcctg 120
 actcagatgt ctctctttgc catttttggg ggcattggaag acaacatgct cctgagtgtg 180
 atggcctatg accggtttgt agccatctgt caccctctat atcattcagc catcatgaat 240
 ccgtgtttct gtggcttctt acttttgttg tctttttttt tttttctcag tcttttagac 300
 acccagctgc acaacttgat tgctttacaa atgacctgct tcaaggatgt ggaaattcct 360
 aatttcttct gtgaccttc tcaactcccc catcttgcat gttgtgacac cttaccaaat 420
 aacatcatcg tgtatttccc tgctgtcata tttgttttcc ttcccatctc ggggaccctt 480
 ttctctttta aactgtttgt ttctccatt ctgagggttt catcatcagg cggaagat 540
 aaaaccttct ccacctgtgg gtctcacctg tcagttattt gcttatttta tggaaacagg 600
 gttggagggt acctcagttc agatgtgtca tcttccctga gaaaggctgc agtggcctca 660
 gtgatgtaca agatggtcac ccccatgctg aacccttca tttacacct gcgg 714

<210> 786
 <211> 962
 <212> DNA
 <213> Unknown (H38g636 nucleotide)

<220>
 <223> Synthetic construct

<400> 786
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 gaggcagaac attatgtgga tatccatccc cttctgcctg atatacacca tcatctttcc 120
 gggaaatggc atcattcttc acatcatccg aattgactct tctttgcacc aaccatgta 180

ctattttctg gccatgccgg cctttgttga acttggtgtc tctgcttcca ccatgccac	240
tgtgttaage atattcctct ttggcattaa cgatgtcagt tttggtggtt gcctgtcca	300
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ccactcagat ctgatcaaat tgcctgtgtg agacacacgc cccaatagca tcctggctct	600
atttgtcatt accttcacat ttggactgga cttattgttc attgtggttt cttatgtgct	660
gattcttcac acagtactgg aaatagcttc tggagcaggg cgtggcaggc actcaacaca	720
tgtgtgtcgc acatatgtgc tgtgcttgtg tactatgtgc ccatgatcag cctctcctga	780
tgcaccgctt tggacggcat ttacctccac ttttccagac tgtcacggcc aatgcttacc	840
tcttctttcc tcctgtgggc aaccccatgt tctatagtat caaaatcaaa gaaattcgca	900
acagcgttgt tcttacacta tccaggaaga ggggtgagtt ctaatggaga ccgaagatac	960
cc	962

<210> 787

<211> 872

<212> DNA

<213> Unknown (H38g637 nucleotide)

<220>

<223> Synthetic construct

<400> 787

acctcagagg atccagaacg gcagctggtc cttgctggac tgttcctgtc catgtgcctg	60
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cctccatgta cttcttcctc tccaacctgt ccttgccctga catcggtttc acctccacca	180
cggcccccca gatgactgtg gacatccagt ctgcgcagcag agtcactctcc tatgcaggct	240
gcctgactca gaagtctctc tttgccattt ttggaggcac ggaagagaga catgctcctg	300
agtgtgatgg cctatgaccg gtttgtagcc atctgtcacc ctctatatca ttcagccatc	360
atgaacctgt gtttctgtgg ctctcctagt ttgctgtctt tttttttct cagtctttta	420
gactcccagc tgtacaactt gattgcctta ctaatgacct gcttcaagga ggtggacatt	480
cctaatttct tctgtgacct ttctcaactc ccccatcttg ccgttgtgac accttcatca	540
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ttttctctta ctataaaatt gtttccctcca ttctgagggt ttcacatca ggtgggaagt	660
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gtgtgtggagg gtacctcagt tcagatgtgt catcttccc cagaaagggt gcagtggctg	780
cagtgatgta cacgggtggc acctccatgc tcaaccctt tatctacagc ctgggaaaca	840
gggatattaa aagtgtcttg cggcgggcgc aa	872

<210> 788

<211> 646

<212> DNA

<213> Unknown (H38g638 nucleotide)

<220>

<223> Synthetic construct

<400> 788

ctagtggact tttgttactc ttcagctgtc actcccacag tcatagctgg gctcgttata	60
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gccactgtgg aaaatttctt cttggcctca atggcctatg accgctatga tgcagtgtgc	180
aaacccctac attacaccac caccatgaca acaagtgtgt gtgcatgtct ggctataatc	240
tgttatgtct gtggtttctt gaatgcctcc atacacattg gggaaacatt gtctctcttt	300
ctgtatgtcc aatgaagtcc attgcttttt ctgtgatgtt ccaccagtca tggctctgtc	360
ttgctgtgat agacatgtga atgagctagt tctcatttat gtagccagtt tcaatatctt	420
ttctgccatc ctagtatatc tgatctccta cctattcata tttatcacca tcctaaagat	480
gcactcagct tcaggatacc agaaggcttt gtccacctgt gcctcccacc tcaactgcagt	540
catcatcttc tatgggacta ttatcttcat gtacttacag ccagctctg gtcactccat	600
ggacacagac aaactggcat ctgtgttcta tactatgatc atcccc	646

<210> 789
 <211> 648
 <212> DNA
 <213> Unknown (H38g639 nucleotide)

<220>
 <223> Synthetic construct

<400> 789
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 gtggacacgg acaatttcct cctagctgtg atggcctatg accactttgt cgccgtgtgc 180
 cacccttac attacacagc aaagatgacc catcagctct gtgccctgct ggttgctgga 240
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 ttctgtgcag acaatgccat cactcacttc ttctgcatg tgactccct actgaaactc 360
 tectgctcag acacacacct caatgaggtc ataactctta gtgaggggtgc cctggctcatg 420
 atcaccccat ttctttgcaa cctggcgtct tatatgcaca tcacctgcac tggcctgaag 480
 ggcccatcca caaaggggaag gtggaaagcc ttctccacct gtggctctca cctggctgtg 540
 ggtctctctt tctacagcac catcactgct gtgtatttta accctctgtc ctccactca 600
 gctgcgaaag acactatggc tactgtgttg tatacagtag tgactccc 648

<210> 790
 <211> 471
 <212> DNA
 <213> Unknown (H38g640 nucleotide)

<220>
 <223> Synthetic construct

<400> 790
 atctgcagcc ccttgctgta caatgtcatc atgtcctatc accactgctt ctggctcaca 60
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 ctctttttgt gcaagactaa tgtgattaac cattattttt gtgatctctt ccctctcttg 180
 gggctctcct gctccagcac ctacatcaat gaattactgg ttctggctctt gagtgcattt 240
 aacatcctga cgctgcctt aaccatcctt gcttcttaca tctttatcat tgccagcatc 300
 ctccgcattc gctccactga gggcagggtc aaagccttca gcacttgag ctccacatc 360
 ttggctgttg ctgggtttctt tgggtctgca gcattcatgt acctgcagcc atcatctgtc 420
 agctccatgg accaggggaa agtgcctctt gtgttttata ctattgttgt g 471

<210> 791
 <211> 975
 <212> DNA
 <213> Unknown (H38g641 nucleotide)

<220>
 <223> Synthetic construct

<400> 791
 atgaagactt tgtgttcctt tcttcagatc agcagaaata tgcatcaaga aaaccaaaacc 60
 accatcactg aattcattct cctgggactc tccaaccagg ctgaacatca aaacctcctc 120
 tttgtgcttt tcctgagtat gtatgtggtc actgtgggtg ggaacgggct catcattgtg 180
 gctatcagct tggatatata ccttcacacc cccatgtatc tcttccttgc ctacctatcc 240
 tttgctgata ttctctccat ttccaactca gtcccaaaa tgctgggtgaa tattcaaacc 300
 aacagccaat ccatctctta tgagagctgc atcacacaga tgtacttttc tattgtgttt 360
 gtcgtcactg acaattttgct tttggggacc atggccttcg accactttgt ggcgatctgc 420
 caccctctga actatacaac ttcatgcgg gccagggttcg gcactttgct cacagtcac 480
 tcgtgggttc tcagtaatat tattgtctt acacacacc ttctgtctat tcaattgtctc 540
 ttctgtgacc acaactctt cccacacttc ttctgtgact tggccctct gctcaaactg 600
 tcctgttcag atacaatgat caatgagctt gtgttggtta ttgtgggttt atcagttatc 660
 atcttccctt ttgtactcat cttcttctcc tatgtctgca tcatcagagc tgtcctggga 720
 gtatcatcca cacagggaaa gtggaaagcc ttctccactt gtggctctca cctgacaatt 780

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gcattactgt tctacggaac cactgtaggc gtgtactttt tccccctctc cactcaccct 840
gaggacactg ataagattgg tgctgtccta ttcactgtgg tgacacccat gatgaacccc 900
ttcatctaca gcttgaggaa taaggatatg aaaggtgccc tgagaaagct catcaataga 960
aaaatttctt ccctt 975
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<210> 792

<211> 943

<212> DNA

<213> Unknown (H38g642 nucleotide)

<220>

<223> Synthetic construct

<400> 792

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atgcaaaaag aattatttgt catgttttta ttcacatacg ttgtgactgt gttggggaac 120
cagctcattg tggtgactat cattgccagc ccttccttgg gctccccaat gtacttcttc 180
cttgccctgcc tgtcatttat agatgctgca tatttcaactg tcatttctcc caaattgatt 240
gtggacttac tctgtgataa aaagactatt tccttccaaa cgttcatggg ccaactattt 300
atagaccact tctttggtgg tgcagaggcc ttccttctgg tggatgaggc ctatgatcgc 360
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cttgccattgc tgggtgctgc gacaggcggg tttgtgcatt ctgtgtttca aattgttgtt 480
gtgtacagtc tccctttctg tggcgccaat gtcattgatc atttcagttg tgacatgtat 540
ccattattgg aactggcatg aactgacacc tactttatag gcctcactgt tgttttcagt 600
ggtggagcac tctgtatggg catcttcacc cttctaataa tttcctatag ggtcacccta 660
aactccctta aaacttacac tcaggaaggg agcataaaagc cctgtctacc tgcagctccc 720
acatcactgt gattgttctc tttttattcc ctgtatttcc atatatgtga gacctgtttc 780
aaacttttct attgacacat tcatgactgt cttttatata gttatcacac ccaagttgaa 840
tcctttaata tacactttca gaaattcaga gatgagaaat gttatagaaa aactcttggg 900
gaaaaaggta actatattta gaataacagg gtccatccctc atg 943
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<210> 793

<211> 942

<212> DNA

<213> Unknown (H38g643 nucleotide)

<220>

<223> Synthetic construct

<400> 793

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gtgcaaatgc attatttctc atgttttact cacataattg gtgacaacag tggggaacct 120
gtcatttgtg tgactatta ttgccagccc ttccttgggc tccccagtgt atttctgact 180
tgccctgtctg tcatgtatag atgctgcata ttcactacc atttctccca aactgattgt 240
agagttactc attgataaaa agactatttc cttccgagct tgcattgggc agctatttat 300
agaacacttg tttggtggta ctgagatctt cattctgatg atgatggcct gtgatcgcta 360
tgtggacatc tgtaagccac tgcactattt gaccatcatg aattgacagg tttgcatcct 420
tctgttgggtg ttggctgtga caggagggtt tgtacattct atgtttcaaa ctgttgttgt 480
gtacaatctc cctttctctg gcccgaatgt cattgacatt gaccactttg tctgtgacat 540
gtaccatta ttggaactgg cgttcactga tactactttt ataggcctca ctgttgttgt 600
caatgggtgga gcaatgtgta tggatcatct caccattcta ctaataatcct acggaatcat 660
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ccccacata accgtgggtg tctctttttt tgttccctgt attttcatat atgttagacc 780
tgtttcaacc tttcctattg ataaattcat gactgtgttt tatacagtta tcacacccat 840
gttgaatcct ttaatatata cgttgagaaa ttcagagatg agaaactcta tagaaaatct 900
cttgtgtaaa aaagctatct gtagtttaga taagagtgtc cc 942
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<210> 794

<211> 945

<212> DNA

<213> Unknown (H38g644 nucleotide)

<220>

<223> Synthetic construct

<400> 794

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cctgatgtgc	aaaatgcgct	atttgatcatg	tttttactga	catacattgt	gacaatgggtg	120
gggaacctac	tcattgtggt	gactattatt	gccagccctt	ccttgggctc	cccaatgtac	180
tttttccttg	cccacctgtc	atttatagat	gctgtgtatt	ccaccaccat	ttctcctgta	240
ttgattgtag	acttactctg	tgacaaaaag	acgatttctt	tctgagcttg	catgggacaa	300
ctgtttatag	accacttatt	tggtggttct	gagggtcttc	ttctgggtgg	gatggcctgt	360
gatcgctgtg	tggccatctg	taagccactg	cactatttga	ccatcatgaa	tcgacagggt	420
tgcatcttc	tcttgggtgt	ggctgtgact	ggagggtttg	tgcatcctgt	atttcaagtt	480
gttgttgtgt	acagtctccc	tttctgtggc	cccaatgtca	ttgaccactt	tttctgtgac	540
atataccctt	tatttggaac	tgcatgacac	tgacacctac	tttataggcc	tcactgtggt	600
tttcaatggt	ggagcaatgc	gtatggtcat	cctcacccct	ctactagtct	tctatggagt	660
catacctaaac	tcccttaaaa	cttacagtca	ggaagggagg	cataaagccc	tgtctacctg	720
cagctcccat	gttaccgtgg	ttatcttgtt	ttttgcttcc	tgtattttca	tatatgttag	780
acctgtttca	aattttctgt	tgataaattc	atgactgtgt	tttatacggt	tatcacaccc	840
atgttgaatc	cttttatatg	catgttgaga	aattcagaga	tgagaaatgc	tatagaaaaa	900
ctcctgtgta	aaatgaactg	tagttagaat	aagagtgttc	cttcc		945

<210> 795

<211> 939

<212> DNA

<213> Unknown (H38g645 nucleotide)

<220>

<223> Synthetic construct

<400> 795

atgggactga	gtaacaatgt	tacagaactt	ttcctcctgg	gcctcactca	ggatctcgat	60
gtgcaaaatg	cattatttgt	catgttttta	ctaacataca	ttgtgactat	ggtggggaac	120
ctgctcattg	tggtgactat	tattgccacc	ccatccttgg	gtccccaat	gtacttttcc	180
cttgccctgcc	tgctatttat	agatgctgtg	tattccacca	ccatttatcc	caaattgggt	240
gtagactaac	tccataatta	aaagactatt	ttgttcccaa	cttgcattgg	ccagccactt	300
acagaccact	tatttggtgg	tggtgaggtc	tttttttctg	ttggtgatgg	cctgtgatcg	360
ctatgtggcc	atctgtaagc	cactgcacta	ttttaccatc	atgaatcgac	aggttttcat	420
ccttctgttg	gtagtggctg	tgactggagt	tttgtgcgtt	ctgtgttcca	aattgttgtt	480
gtgtacagtc	tccctttctg	tggccccaat	gtcattgacc	actttttctg	taacatgtac	540
ccattaatgg	aaatggcatg	aactgacacc	tactttatag	gcctcactgt	ggttttcaag	600
gttgaagcaa	tctgtgtggt	catcttcacc	cttctactaa	tctcctctgg	cgctatccta	660
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cgcattactg	tagttgtcct	cttttttgtt	ccctgtattt	tcatgtatgt	tagacctgtt	780
tttaacttcc	ccattgataa	atttattatt	gtgttttata	cagttatcac	acccatgctg	840
aatcctttaa	tatacatggt	gagaaattca	tagacgagaa	atgctataga	aaacccttag	900
tgtaaaaaat	taactgtaga	tagaataaga	gtgtacatc			939

<210> 796

<211> 945

<212> DNA

<213> Unknown (H38g646 nucleotide)

<220>

<223> Synthetic construct

<400> 796

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atgcaaaaca	cattatttgt	catgttttta	ctcacataca	ttgtgacagt	ggtggggaac	120
ctactcgttg	cggtgactat	tattgtcagc	ccttccttga	gtccccaat	gtaattcttc	180
cttgcttgcc	tgctattaat	agatgctgta	ttatccacca	ccatttctcc	catattgatt	240

gtagacctac	tctgtgacaa	aaagactatt	tccttcccag	cttgcattggg	ccagctatatt	300
acagaccact	tggttggtgg	aactgagatc	ttccttctgg	tggtgatggc	ctatgatcgc	360
tacgtggcca	tctgtaagcc	actgcactat	ttaaccatca	tgaatcgaca	ggtttccatc	420
cttctgttgg	tggtggccat	gactggaggt	ttccttcatt	ctgtgtttca	aattgctgtt	480
ctgtacagtc	tccctttctg	tggccccaat	gtcattgacc	actttttctg	tgacatgtac	540
ccattattgg	aactggcgtg	cactgacacc	tactctatag	gcctcactgt	agttttcagt	600
ggtggagcaa	tgtgtatggt	catcttcgcc	cttctactaa	tctcctatgg	agtcagccta	660
aactccctta	aaacttatag	tcaggaaggg	aggcgtaaag	ccctgtctac	ctgcagctcg	720
cacatcaccg	tggttgctct	cttttttgtt	ccctgtatatt	tcatgtatgt	tagacctgtc	780
tcaaacttcc	ctattgataa	attcgttact	gtgttttata	cagttatcac	acccatgctg	840
aatccttttt	tatacacgtt	gagaaattca	gagatgataa	atgctataaa	acacctgttg	900
tgtaagaagc	taactatagt	tagaataaga	gtgtccctcc	tcatg		945

<210> 797

<211> 967

<212> DNA

<213> Unknown (H38g647 nucleotide)

<220>

<223> Synthetic construct

<400> 797

atgggatcta	gtaacaatgt	tacagaatatt	gtcctcctgg	ccctcactca	ggctcctgat	60
gtgcaaaaag	tattatttgt	aatgttttta	ttcacataca	ttgtgactat	ggtgggcaac	120
ctgctcactg	tggtgacct	ttttgccctc	cctctttggg	ctccccagtg	taactcttcc	180
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tatgtggcca	tctctaagcc	actgcactat	ttgatcatcg	tgaatcgact	ggtttgcatc	420
cttctgttgg	tggtggccgt	gactggagga	ttttgaattc	tatgtttctt	tttttttaaa	480
tttattttat	tttttatgtg	aattctatgt	ttcaaattgt	cgttgtgtac	agtctccctt	540
tctgtggctc	caatgtcatt	gaccacattg	tctgtgacat	gtaccatta	ctggaactgg	600
catgcgctga	cacctacttt	atagggctca	ctgtgattgc	caatgggtgga	gcaatctgta	660
tggtcatctt	ctgccttcta	ctaacctcct	atggagtcac	cctaaacttc	cttaaaactt	720
atagtcaaga	agggaggcat	agaaccctgt	ctacctgcag	ctcccacatt	actgtgggtg	780
tcctcttttt	tgttccctgt	attttcatgt	atgtagtacc	tgtttcaaac	ttccctattg	840
ataaattcat	tactgagttt	tatacagtta	tcaccccaaa	gttgaatcca	ttaatccaac	900
cactgagaaa	ttgagaaatg	agaattacta	tgaagaaact	ctggtgttaa	acctgaacta	960
tagtttag						967

<210> 798

<211> 930

<212> DNA

<213> Unknown (H38g648 nucleotide)

<220>

<223> Synthetic construct

<400> 798

atgaaaaata	agaacaatgt	gactgaattt	atcctcttag	ggctcacaca	gaaccctgag	60
gggcaaaaag	ttttatttgt	cacattctta	ctaactctaca	tggtgacgat	aatgggcaac	120
ctgcttatca	tagtgacct	catggccagc	cagtccctgg	gttcccccat	gtactttttt	180
ctggcttctt	tatcattcat	agataccgtc	tattctactg	catttgctcc	caaaatgatt	240
gttgacttgc	tctctgagaa	aaagaccatt	tcctttcagg	gttgatggc	tcaacttttt	300
atggatcatt	tatttgctgg	tgctgaagtc	attcttctgg	tggtaatggc	ctatgatcga	360
tacatggcca	tctgtaagcc	tcttcatgaa	ttgatcacca	tgaatcgtcg	agtctgtgtt	420
cttatgctgt	tggtggcctg	gattggaggc	tttcttctact	cattgggttca	atttctcttt	480
atttatcagc	tccctttctg	tggacccaat	gtcattgaca	acttcctgtg	tgatttgtat	540
cccttattga	aacttgcttg	caccaatacc	tatgtcactg	ggctttctat	gatagctaata	600
ggaggagcga	tttgtgctgt	caccttcttc	actatcctgt	tttctatagg	ggcatatta	660
cactctctta	agactcagag	tttgggaagg	aaacgaaaag	ctttctacac	ctgtgcatcc	720

cacgtcactg	tggtcatttt	attctttgtc	ccctgtatct	tcttgatgc	aaggcccaat	780
tctacttttc	ccattgataa	atccatgact	gtagttctaa	cttttataac	tcccatgctg	840
aaccactaa	tctataccct	gaagaatgca	gaaatgaaa	gtgccatgag	gaaactttgg	900
agtaaaaaag	taagcttagc	tgggaaatgg				930

<210> 799

<211> 825

<212> DNA

<213> Unknown (H38g649 nucleotide)

<220>

<223> Synthetic construct

<400> 799

atggtgggaa	acctcctcat	ttgggtgact	actattggca	gcccctcctt	gggctcccta	60
atgtacttct	tccttgccca	cttgtcactt	atggatgcca	tatattccac	tgccatgtca	120
cccaaatgga	tgatagactt	actctgtgat	aaaatcgcta	tttccttgct	agcttgcatg	180
ggtcagctct	tcatagaaca	cttacttggt	ggtgcagagg	tcttcctttt	ggtggtgatg	240
gcctatgata	gctatgtggc	tatctctaag	ccgctgcact	atttgaacat	catgaatcga	300
ctggtttgca	tccttctggt	ggtggtggcc	atgattggag	gttttgtgca	ctctgtggtt	360
caaattgtct	ttctgtacag	tctaccaatc	tgtggcccca	atggtattga	ccactctgtc	420
tgtgacatgt	acccattggt	ggaactgttg	tgcccttgaca	cctactttat	aggactcact	480
gtggttgcca	atggtggaat	aatttgtatg	gtcatcttta	cctttctgct	aatctcctgt	540
ggagtcatac	taaacttcct	taaaacttac	agtcaggaag	agaggcataa	agccctgcct	600
acctgcacat	cccacatcat	tgtggttgcc	ctcgtttttg	ttccctgtat	ttttatgtat	660
gtagacccg	tttccaactt	tccttttgat	aaattaatga	ctgtgtttta	ttcaattatc	720
acactcatgt	tgaatccttt	aatatactcg	ttgagacaat	cagagatgaa	aaatgctatg	780
aaaaatctct	ggtgtgaaaa	gttaagtata	gtagaaaaa	gagta		825

<210> 800

<211> 654

<212> DNA

<213> Unknown (H38g650 nucleotide)

<220>

<223> Synthetic construct

<400> 800

ttgcctgaca	tgggtttcac	ctccaccacg	gtccccaaga	tgattgtgga	catccagtct	60
cacagcagac	tcattctcta	ggcaggctgc	ctgactccca	tgtctctctt	tgccatcttt	120
ggaggcatgg	aagagagaca	tgctcctgag	tgtgatccct	atgaccctgt	tgtagccatc	180
tgtcaccctc	tatatcattc	agccatcatg	aaccctgtgt	tctgtggctt	tctagtgttg	240
ttgtcttttt	tttctcagtc	tccttttagac	gccaggtgac	acaacttgat	tgcccttaca	300
atgacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gggaaccttc	tcaactcccc	360
catcttgcac	gttgcgacac	cttcaccaat	aacataatca	tgtattcccc	tgctgccata	420
tttggttttc	ttcccatctc	ggggaccctt	ttctcttact	ataagattgt	ttcctccatt	480
ctgagggttt	cttcatcagg	tggaagatgt	aaagccctct	ccacctgtgg	gtctcgccctg	540
tcagttgttt	gctgagttta	tggaacaggc	gttgagagat	acctcggttc	agatgtgtca	600
tcttccccga	gaaagggtgc	agtggcctca	gtgatgtaca	cggtgggtcac	cccc	654

<210> 801

<211> 648

<212> DNA

<213> Unknown (H38g651 nucleotide)

<220>

<223> Synthetic construct

<400> 801

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gcagcaagtc	ccattttctat	ggctgttgtg	ccacacaaat	tttcttctat	acatcactgc	120